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THE SPHERE, AUGUST 31, 1940
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THE SPHERE

Vol. CLXII No. 2119 WITH WHICH IS INCORPORATED THE GRAPHIC AUGUST 31 1940

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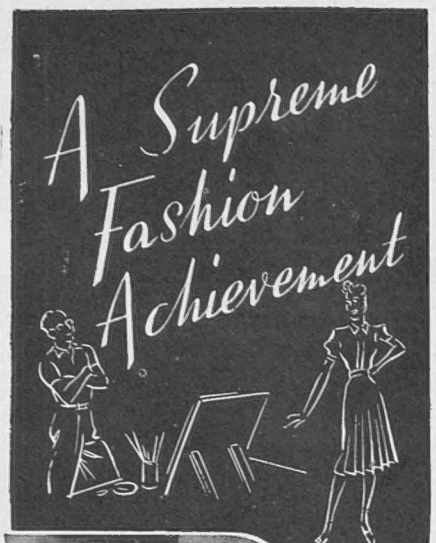

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MINISTRY OF FOOD

THE WEEK'S

FOOD FACTS No. 5

Start collecting these useful advertisements now. Pin them up in your kitchen where you can always see them.

DO you feel, as many women do, that war-time housekeeping would be easier if only you could count on getting a little special advice from a kitchen expert? Here's your chance—without trouble, without cost, without even having to leave your own home. Just switch on your radio every morning at 8.15. You'll hear the answers to your own kind of food problems.

ON THE KITCHEN FRONT

HOW TO USE OLD VEGETABLES.

Garden Peas that have grown hard through lack of water or tough with age, can be made into excellent soup. Rub a small onion through a sieve and boil it for half-an-hour with your peas in enough water to cover. Then add milk or stock or both to suit your own taste. A little cornflour, carefully blended, stirred into the soup, will thicken it.

Scarlet Runners. If your beans have grown too old and tough, boil the *inner seeds*—like haricots—with a good dash of salt and pepper and, if possible, a little margarine.

HEALTH HINT.

Try mustard and cress, watercress, or even young nasturtium leaves instead of jam at tea-time. It makes a change; it's better for you; and it saves the country's sugar.

PULPING PLUMS FOR WINTER USE.

Pulping is an excellent way of preserving the plums, now so plentiful, for winter use. Pulping needs no sugar. It is a perfectly simple process: Just stew the plums thoroughly in a saucepan with a little water. When cooked, pour them into *hot*, clean bottles (or any receptacles that can be made airtight). Seal *immediately* with hot lids. If you have no lids, use two or three layers of paper brushed over with flour paste. For large quantities of plums, you may find it easiest to use a heated big crock. Either cork it or cover it with a layer of mutton fat or paraffin wax.

HOW TO SAVE BREAD.

First, you must curb your liking for fresh bread; always wait at least 24 hours before cutting a newly-baked loaf. Don't keep it in a closely-sealed tin. If you use a biscuit tin, punch a few holes in the lid. Brown bread is best wrapped in muslin and kept on a shelf.

THE MINISTRY OF FOOD, LONDON, S.W.1

Smokers' 'Fur'

How to detect it—
How to prevent it

Try this now. Run your tongue round your mouth—do you notice it . . . a rough woolly feeling. Smokers' fur has got a hold, and is damaging and staining your teeth. But don't worry, you can stop this fur from ruining your teeth to-day.

Dentists know smokers' fur is caused by excess acid in the mouth. Kill the acid and you shift the fur. What is the scientific way to destroy mouth acid? 12,000 dentists say 'Milk of Magnesia' brand antacid is the most effective antacid known. 12,000 dentists urge smokers to use the toothpaste containing 'Milk of Magnesia'—the only toothpaste containing it—Phillips' Dental Magnesia.

Commence fighting mouth acid to-night. Get a tube of Phillips' Dental Magnesia and clean your teeth with it each night and morning. Then you'll feel the difference; no more morning mouth; no more stale breath. Instead you'll have teeth which look clean, feel clean, are clean; a sweet mouth to give new zest to smoking. A mouth that will say Good morning! and mean it.

6d., 10½d. and 1/6. Sold everywhere.

Phillips' Dental Magnesia

★ *'Milk of Magnesia' is the trade mark of Phillips' preparation of Magnesia.*

'All-ways' reliable

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THE SPHERE

With which is incorporated "THE GRAPHIC"

The Empire's Illustrated Weekly

London, August 31, 1940

After GREAT ADVENTURES at SEA

H.M. Submarine "Sealion" Returns to Port

Commander Ben Bryant, D.S.C., and his Second-in-Command, Lieutenant John Bromage, D.S.C., Prepare to Go Ashore with the Other Officers of the Heroic Submarine

Sealion already has a record of great heroism—her commander and second-in-command both have the D.S.C. for previous exploits. Now she has returned, once again, safe to port with a wonderful story of great daring. In the Norwegian campaign she attacked a German U-boat and sank three German transports and an anti-submarine ship; now she has a tale to tell of a fight on the surface with another enemy submarine, of the sinking of a 3,300-ton store ship, of how she crept inside a German convoy outside an enemy naval base and had her periscopes torn away in a collision, of how she spent hours on the sea-bed while depth-charges were dropped and stayed two days in German waters while the crew effected repairs on the surface, of how she came home, navigating "blind" by a masterpiece of seamanship. At the moment *Sea ion* is lying at a Scottish base, the gallant officers and crew resting after their heroic exploits

Postage—Inland, 2d.; Canada and Newfoundland, 1½d.; Elsewhere Abroad, 2d.

A WAR NEWSLETTER —No. 52

32–34, ST. BRIDE STREET, E.C.4

THE PREMIER'S REVIEW.

One of the chief merits of Mr. Churchill as a war leader is his profound understanding of the British character and his perfect technique in taking us into his confidence. His line is to say to us metaphorically: "Now, gentlemen, let's sit down and worry this problem out. We are all in the same boat. There are no distinctions of rank. We are all working on vital jobs of equal importance. Let us talk on the basis that we are all men-at-arms (man, woman, and child), who accept, as part of the business of fighting for our lives, the terrors and losses and beastliness of war, and are concerned solely with what is relevant to achieving victory." That is the right technique. It is not easy to carry it out through a microphone. It is one of the mysteries of the war or the radio that a fine writer and manly speaker like Mr. Duff Cooper now "comes across" more often like a psalm-singing missionary presiding over a mothers' meeting, and Sir Archibald Sinclair, another imitator of Mr. Churchill's methods and inflexions, comes across rather "sing-song" also. Obviously the microphone is a difficult vehicle and Mr. Churchill's conquest of it is a very happy national asset. It would be *vieux jeu* to marshal again so late in the day the chief points in his speech. It was in truth a review of a year of war. The bones and beak of its confidence were the achievements of the past two months, the snatching of real prospects of victory from the jaws of what appeared to nine-tenths of the world as almost certain defeat. Materially we face the future stronger than before the disasters of June, and, morally, stronger than ever before in the history of our race.

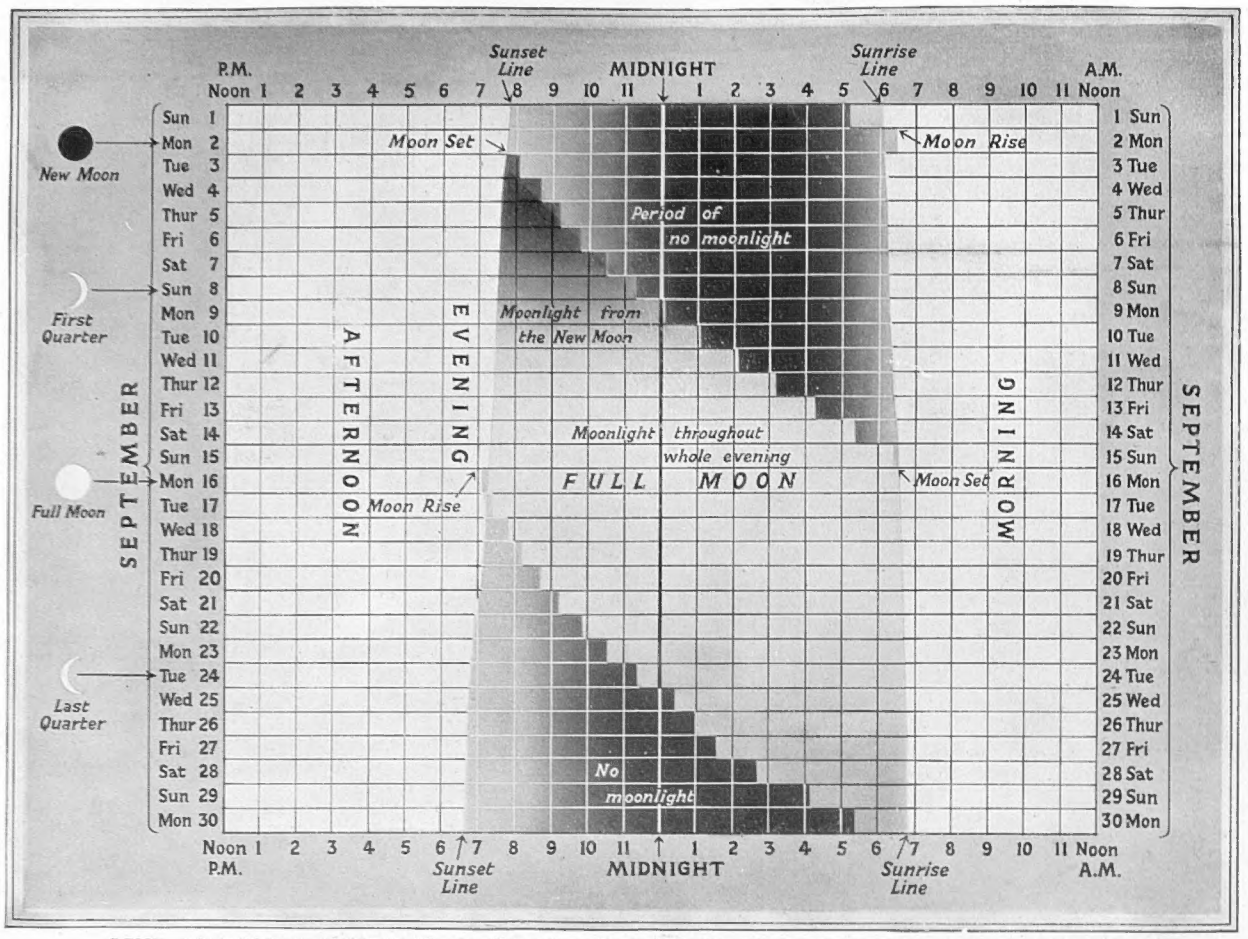
A YEAR OF WAR.—A year of war—not to mention two years of the South African, and four years of the late Great, a good slice from the life of a man. How vividly I recall the first week of this war, that glorious September weather, serene, hot, still. We worked like beavers in our village of Slocombe Parva, handling the dispersed children, and conveying them to their (long abandoned) war homes. We watched our bombers in formation conveying their belongings to the pleasant land of France. Only two things seemed certain to us then. One, that within a few hours 100 enemy bombers would descend on Slocombe Parva and lay it even with the ground. The other that, however long the war lasted, the French and ourselves would stand shoulder to shoulder till victory was attained. How little we knew! I suppose that after a year of war only 20 per cent. of the villages of England have tasted war, even under *blitzkrieg* conditions. Any day death may come, but that is true also of peace. England is a small island, the German air force is big. Yet there are, I now believe, too many important targets, even at the height of the *blitzkrieg*, to make the odds against bombs falling on a given village away from military targets any but outsider odds.

OBSERVERS STILL.—What a deal we have learned! What a lot has happened to the map of Europe! What agonies of suffering our minds have endured! Yet even now the war has in no vital respect touched a large proportion of the nation. There has been no privation, no terrors (again I say for a majority) and possibly for a majority no personal grief. Most of us are the same people, still living somehow in our homes, with our children and familiar furniture about us, living a sort of shadow of our previous existence, still waiting for things to happen which will really bring the war *home to us*. Still we are waiting for the war to *touch us* — individually; again I refer to (possibly a bare) majority. We have endured many reverses and a few glorious victories. Yet still it seems to me (though we do our damnedest as factory workers, Home Guards, constables, A.R.P. workers, nurses, and what not), still we are *observers* of this tremendous drama of heroism and hate, tragedy and thrill; still we are like playgoers sitting in a queer, eerie, yet familiar, theatre watching an impersonal play of an exciting kind, with brief intervals during which our minds turn away to contemplate our own small private affairs. And for the great majority of the German people, that is still more true. But *as a nation*, a year of war has worked miracles upon Britain. It has touched us as a nation. It has unrecognisably transformed us.

IF . . .—If starvation and the moral effect of bombing from the air were at present the only means accepted on either side for ending the war, then the end were not yet computable in months or years on the basis of calculation which I have sketched in. It is interesting to examine this imaginary proposition. Suppose that Roosevelt to-morrow proposed to the combatants to forgo aerial bombing on land and suppose it suited Hitler's book to accept. It would be difficult for Britain then to refuse. If Britain also accepted the convention, which side would lose most by the agreement? In my view it is clear that we should be the losers, if only for the reason that, while the Nazi sources of supplies of petrol and raw material are largely collected and static in known areas, ours are fluid and constantly moving on the high seas, over which we control fairly adequate means of defence. There is another point. In the wastage of pilots and air personnel this hideous form of warfare is constantly reducing the numerical superiority of the Nazis. We are losing one to every three or four of irreplaceable men lost by Germany. The past weeks have done much to reduce the balance in our favour.

OUR AIRMEN AND THEIR GLORY.—It is difficult to find words, let alone new superlatives, to describe our pride and gratitude in the deeds of our airmen. In such circumstances one falls back on short, simple words. They have done what Drake and his men did against that deadly menace in the sixteenth century, they have done what their fathers did a generation ago, and their names and deeds live for evermore. It is not impossible that Hitler is still kept in ignorance of the German air losses of the past weeks. There is colour for the belief that his lieutenants have got into the habit of telling him only what they think he can bear. Granted that Göring believes a percentage of what Goebbels reproduces about the total destruction of most of our air bases and ports, of the chaos of our communications, of the jibbering terror of the inhabitants of these islands, of our internal revolutions, and so forth; granted that he accepts the reports of damage inflicted, given in by the surviving members of his bombing squadrons; yet even so, the facts known to him of his own losses must have given him pause and a first, dreadful doubt about the issue which he has precipitated in his faith in the Nazi air-arm. Oh that we could send back that intelligent Nazi airman prisoner to tell a true story of this "crumbling, blasted island," still unscratched, still unwrung, with its punctual trains, mails and news delivery; its food supplies not perceptibly different from those of peace-time; its cheerful, smiling population in towns and country.

FROM DEFENCE TO OFFENCE.—Hints let fall last week by Sir Archibald Sinclair and General Wavell suggested to our minds that the time might not be so far distant before our "compressing springs" shot out against the dictators "sprawling over Europe"; that defence might yield to offence sooner than we dreamed. A mishearing of Sir Archibald on the wireless gave me quite a shock. "In a month to come we shall sally forth from our fortress . . .", I thought I heard him say. In fact he said "In the months to come." Still, it was a hint, and General Wavell elaborated it. I suppose no more perfect Christmas present could come to a hardworked, holiday bereft nation than the news of a handsome Christmas present of an appropriate kind received by the assassin who carries the curse of Garibaldi as he wanders on his road to ruin. We turn our eyes that way.



"THE SPHERE'S" MOONLIGHT CHART FOR THE FATEFUL (!) MONTH OF SEPTEMBER

If we are to believe what we are told, September is the Month of Invasion. From about the 13th to the 23rd is the "danger period": around the Autumnal Equinox, September 23, the day and night are of equal length, the moon is at the full, and tides are high—therefore, argue the wiseacres, this will be the most propitious period for an attempt at invasion. A report from Madrid goes so far as to say that "Hitler is waiting for the moon to change. We shall then have four weeks of splendid weather for carrying out land, sea, and air operations." If anything goes wrong with this prediction, it will not, after all, be the first time that the date will have been changed. In the meantime, those of our readers who have engagements in the evenings will find our monthly chart of use in gauging the amount of light in the sky

A limited number of these charts will be supplied free of charge on application to the Publisher, "The Sphere," 32-34, St. Bride Street, London, E.C.4, but 2½d. in stamps must be enclosed with the application

KIT TURNOR.—Grantham was a leisurely first stage from Sussex to Inverness by road, and often it was possible to stay a night in August at Stoke Rochford. The enormous house—to which the late and lamented owner himself added a gigantic room of his own designing in glass and wood and stone—was sure to be filled at that time of year. . . Kit Turnor accepted you without question, never explained; his mind was occupied with matters not of individual, domestic, or personal concern but of national or scientific interest. One must qualify that. He was himself a master-cook and knew the refinements of the art of producing delicious food. He was, too, subconsciously aware of your personal needs. No man ever lived who was so free from mundane preoccupations, so utterly unconscious of class distinctions, so visionary and yet so efficient, so aloof and yet so sympathetic. I think of Stoke, with its vast and brilliantly-coloured bedrooms, its immense libraries, its plans and elevations, charts and array of materials for a hundred projects in his brain, as a sort of Gargantuan Aladdin's palace that harboured a rare magician, a scientist and thinker in advance of his age, yet with a sense of the past which was almost Victorian.

AUTUMN.—The summer is waning. Already it is too dark to see the end of even a war-time dinner in daylight. It is almost time to put a match to a wood fire after dinner. The harvest is nearly gathered in. The time is coming when the mists begin to wrap our island in with a blanket of security if not of warmth. Do we regret the passing of the loveliest summer we can clearly remember? Not to the extent to which we should regret it in normal times. It held for us the bitterest griefs and the sharpest testing of any summer we have known. Its joys we could not enjoy; rather its glories served but to enhance our trials and benefit our enemies. We remember this summer of 1940 with the thankfulness and pride of trials adequately endured rather than with gratitude and pleasure for rare delights exploited to the full. We write it off . . . and we chalk it up *alba creta*.

THE OLD STAGER

How the ENEMY'S AIR RAIDERS ARE FOLLOWED

The Watchers of the Observer Corps and the Signallers of the A.A. Defences Keep Check on the Enemy's Movements

THE MEN WHO WATCH THE SKIES — A SCENE IN THE CONTROL ROOM

The work of the Observer Corps is only just becoming known to the general public of this country. Although one of the least known branches of our defensive organisations, however, it is a vitally important unit of our defence. Day and night the members of this Corps keep constant watch, reporting to the Control Room all aeroplane movements whether friendly or enemy. This picture was taken in the very nerve centre of the Corps—the Control Room. Here messages from the various outlying observation posts are received concerning all types of planes observed passing over their territories. From this Control, other centres in adjoining districts are kept informed; and all of them are in direct touch with the Fighter Command

On left—

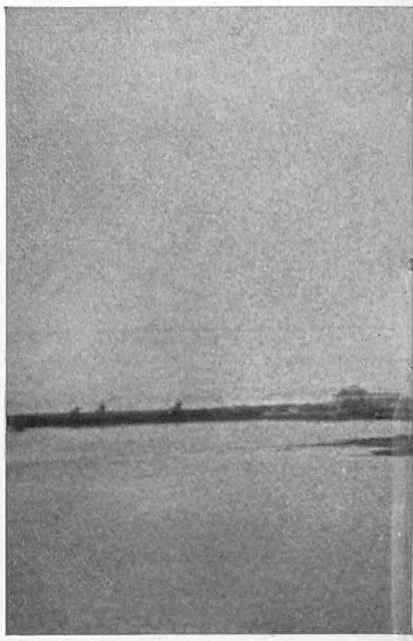
THE ANTI-AIRCRAFT SERVICE —THE SIGNALLER'S DUG-OUT

This picture was taken by a photographer who has just spent several days with an anti-aircraft battery in an area where enemy planes make frequent appearances. An Officer Producing Unit, this battery has reached a high state of efficiency; it is an exciting experience to watch how quickly the guns go into action when the alarm is given. Every minute of the whole twenty-four hours the crews are ready for instant action. This is the signaller's dug-out; in the event of enemy aircraft approaching the coast this signaller is immediately notified from Headquarters and the alarm is then sounded to the battery

RAIDS on LONDON and the SOUTH-EAST COAST

Scenes Taken Whilst the Raids Were Actually in Progress; and Pictures of the Damage Done

THE RAID ON LONDON SEEN FROM THE WEST: THE GLOW IN THE SKY FROM THE FIRE IN THE CITY AREA: On Saturday last, at midnight, bombs fell on a number of areas of London, including the City. Millions of Londoners saw the spectacular glare in the sky from a fire started in the City of London itself by incendiary bombs. The fire, however, was actually of small extent



GERMAN BOMBS EXPLODING AT FOLKE the town, when this picture was machines took part in this raid; but ten aeroplanes. The

THE FENCED-OFF AREA IN THE CITY: WHEN MONDAY MORNING CAME THOUSANDS OF WORKERS TOOK UP THE ORDINARY, EVERYDAY LIFE OF THE CITY, AS USUAL

THE SPECTACULAR SCENE WHEN THE FIRE IN THE CITY WAS AT ITS HEIGHT: The fire started on the ground floor: in a very short space of time the whole of the building was ablaze. London's regular firemen and a host of A.F.S. played hoses on the blaze from all angles

AN HISTORIC CHURCH BECOMES A CASUALTY—THE DETHRONED STATUE OF MILTON OUTSIDE THE CHURCH OF ST. GILES, CRIPPLEGATE: This church dates back to a very early period: in the sixteenth century it was partially destroyed by fire; it narrowly escaped destruction in the Great Fire; and in 1897 it was again damaged by fire. Oliver Cromwell was married there in 1620, and John Milton was buried there in 1674. His statue outside the church was overthrown

LONDON HOMES WRECKED BY BOMBS: Several women and children were killed outright in bed in their fragile old two-storied houses in a London working-class quarter. Those who were able to take cover in the shelters seen in the foreground were, however, unharmed

STONE ON MONDAY AFTERNOON: Bombs were actually exploding, and more were falling on taken. The cameraman was stationed on the cliffs to the east of the town. More than thirty in this, and in the raids on two other South-East Coast towns, the Germans lost at least bombers were accompanied during the attack by escorts of Messerschmitt fighters

PORTSMOUTH: Fifty people were in a shelter when this house and shop, hit by a bomb, collapsed on top of it. All the people escaped injury. Note the manner in which all the kitchen utensils and crockery are still standing, undamaged, on their shelves

RAMSGATE: Damaged houses, bombed during the savage attacks by waves of German planes. Compared with the damage done to property, the number of casualties was small

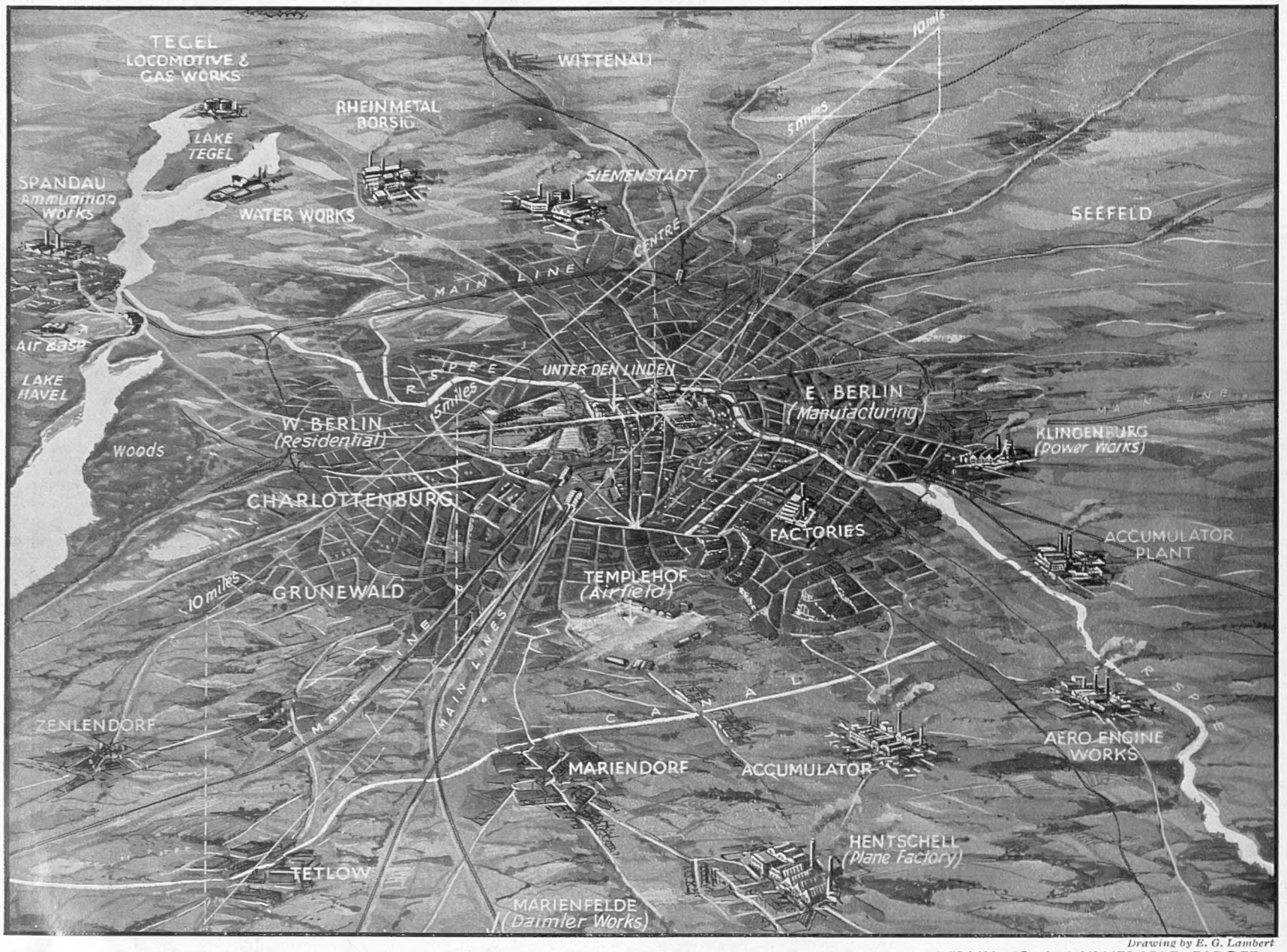
KENT COAST: A street of houses bombed during the raid along the Kent coast. The motor-coach was proceeding along the street, when it ran into a waterfilled bomb hole

THE DOVER BALLOONS STILL COME IN FOR ENEMY ATTENTION: After a fierce battle above Dover Harbour, a Messerschmitt decided to risk machine-gunning a barrage balloon: this attack was successful, and the balloon is here seen coming down in flames. Note the puffs of smoke from the shells of the anti-aircraft barrage. The balloons at Dover are a great hindrance to the German dive-bombers; hence the enemy's desire to abolish them

WEST COUNTRY: Damage to a private house during a raid by German bombers in South-West England. The house was empty when the raid took place

BRITAIN MAINTAINS HER AIR OFFENSIVE OVER GERMANY

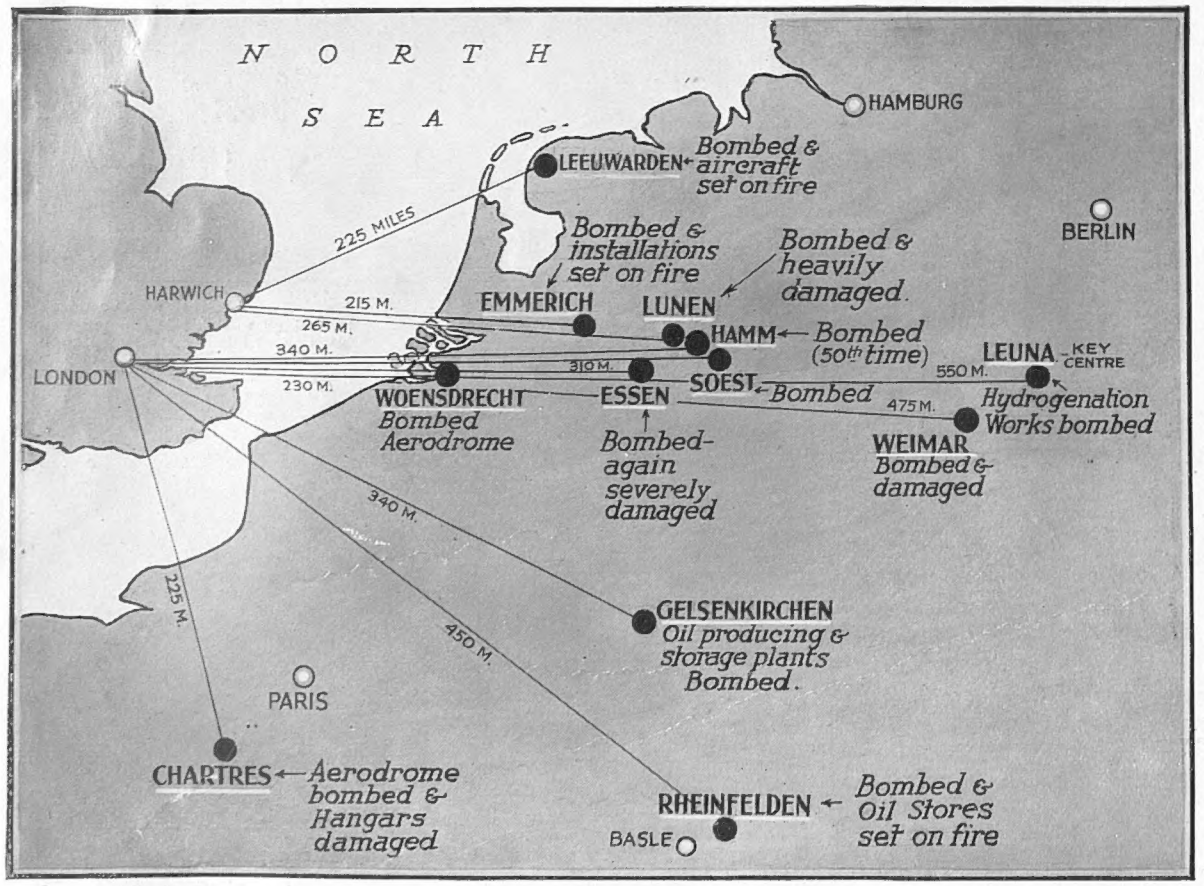
The R.A.F. Raids on Berlin and Other Parts of Germany; and on Italy and the North Coast of France



Drawing by E. G. Lambert

BERLIN IS A VULNERABLE TARGET

After the bombing of London comes the bombing of Berlin. On August 20, British aircraft were reported over the German capital and heavy A.A. gunfire was heard in the western suburbs; whether this was an R.A.F. reconnaissance was not stated at the time; but—on the 26th the R.A.F. were again over Berlin and, according to the German report, "incendiary bombs were dropped on two suburbs." Although the report declared that "no damage" was done, it is difficult to believe this, because practically every quarter of the city is vulnerable, as the above drawing shows. Within a radius of 10 miles from the centre of Berlin, factories, airfields and power plant offer many and valuable targets to our bombers



THIS DIAGRAM SHOWS ONLY A FEW OF THE PLACES BOMBED BY THE R.A.F. IN TWO RAIDS

On the two nights when these places were bombed, a number of other successful attacks were also carried out by bomber squadrons of the R.A.F. Leuna is one of Germany's key production centres, where the hydrogenation plant produces 400,000 metric tons of oil a year. Rheinfelden, near the Swiss border, is a huge aluminium works; it was bombed for an hour and a half, and the damage done must have been appalling. At Gelsenkirchen, two oil producing and storage installations were singled out and systematically bombed for two hours by units of two separate raiding forces; at Lunen, an important munitions factory was bombed—17 tons of high explosives and several hundred small incendiary bombs were dropped; the great Krupps armament factory at Essen, already severely damaged, was again attacked. Other night raiders attacked the Rhine port of Emmerich; and the railway yards at Hamm and Soest received their customary night visit. Other bombers attacked the occupied aerodromes at Chartres, and Leeuwarden in N. Holland

THE GERMANS ACTIVE OVER IRELAND

Enemy machines go out from France into the Atlantic, over the approaches to the Channel; they fly north, round the top of Scotland, cross the North Sea and land in Norway or Northern Germany—a round trip of more than 2,000 miles

Drawing by Ro. and Davies

THE R.A.F. RETALIATION FOR THE ATTACKS ON DOVER: BOMBERS SHOWER A HAIL OF BOMBS ON THE FRENCH COAST

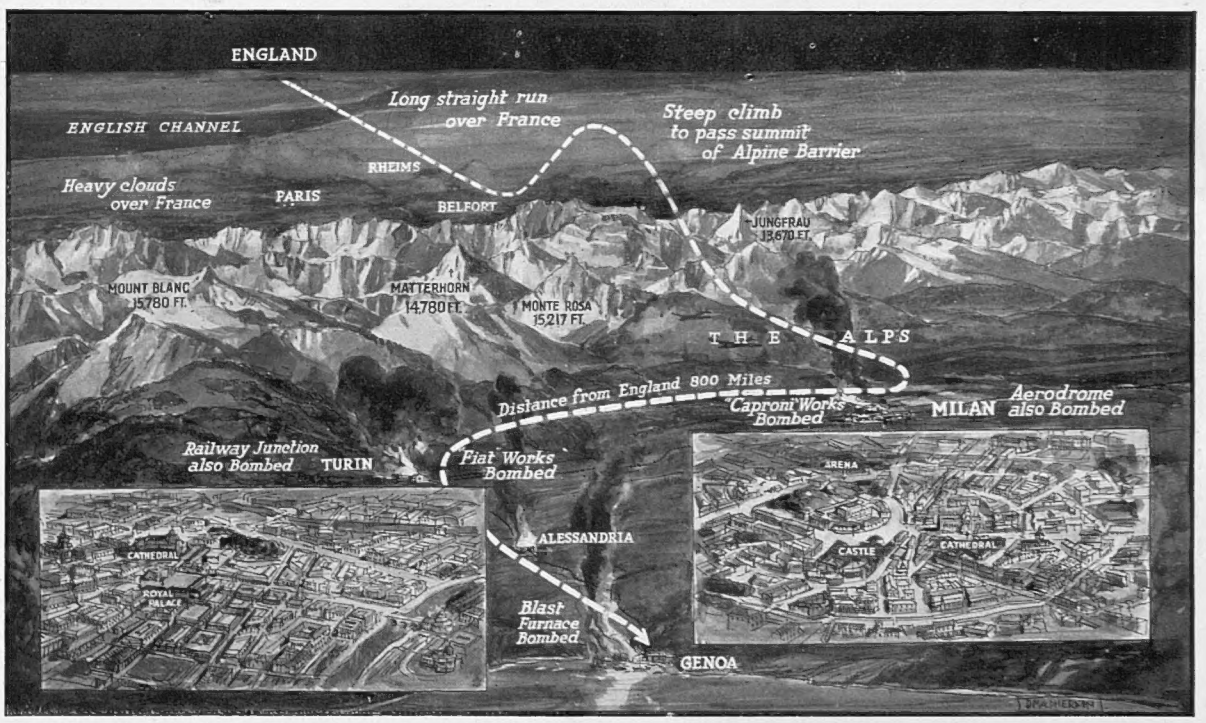
The German attacks, by long-range guns, on Dover were not allowed to go unpunished: instant reprisals were carried out—by our own long-range guns and by the R.A.F. We, too, have guns that can range the Channel, although hitherto there has been no point in using them! Added to the land guns, however, the R.A.F. soon went into action: at the height of the bombardment a sudden fire shot up near Boulogne. "Then, in the intervals of the crashes of the shells, the boom of dropping bombs began to be heard from France. Tracer shells and more flares pierced the sky, and then came a great red glow. More bombs—and more bombs across the Channel . . . Finally, the bombers appeared to succeed. The German guns ceased fire for half an hour. Then the R.A.F. bombers appeared to deliver a fiercer attack. Vivid spouts of flame which flashed over Calais showed that the port was being heavily attacked"

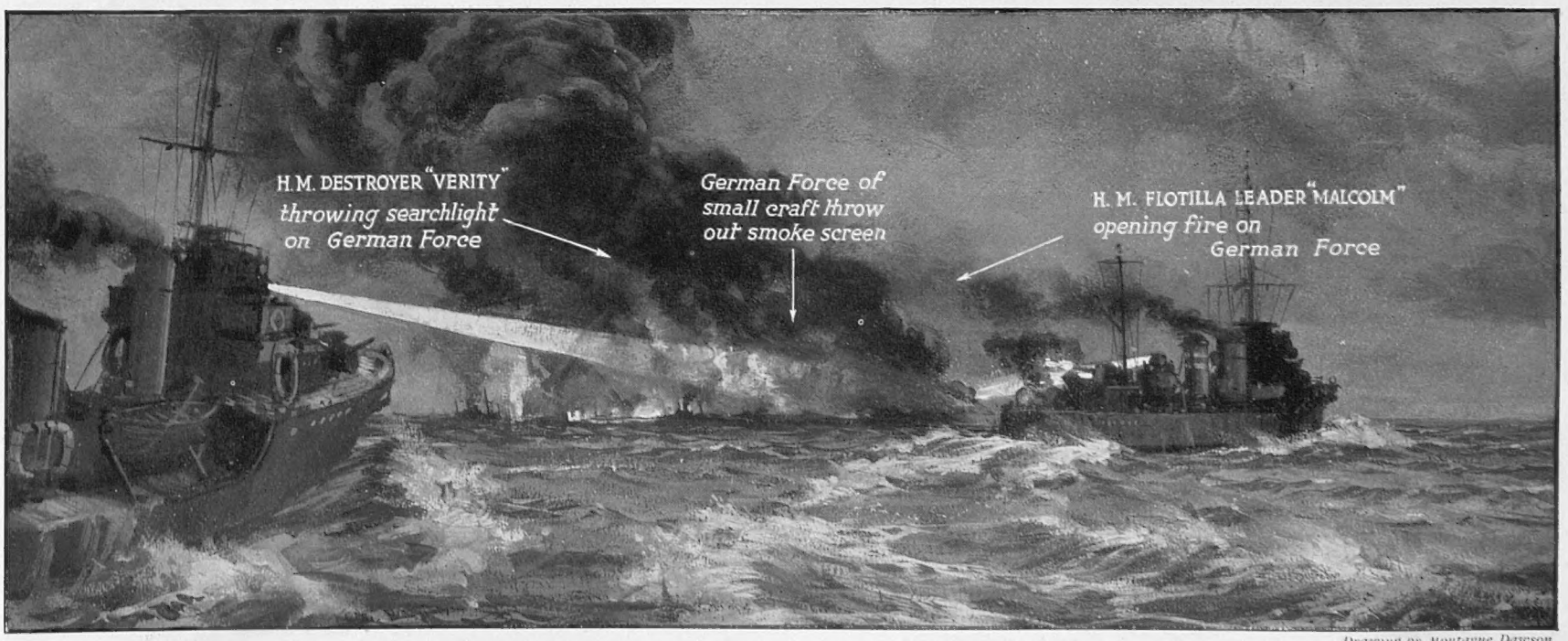
Drawing by D. Macpherson

On right—

LONG-RANGE BOMBERS OF THE R.A.F. ATTACK MILAN AND TURIN IN ITALY

The distance of Italy from this country, and the fact that British bombers have to fly over what is now the hostile territory of occupied France, are no bars to our long-distance aircraft. Three times within a week recently the Caproni Aircraft Factory in Milan and the Fiat Aircraft Works at Turin were attacked. This drawing indicates the route followed by the British aircraft—a distance of 800 miles; in the course of these flights expert navigation is called for. When the Alps are crossed the bombers have to climb to well over 15,000 ft. to clear the Alpine chain which Italy at one time fondly imagined would be a bar to such attack. The damage caused at both Milan and Turin was considerable





Drawing by Montague Dawson

OFFENSIVE ACTION BY BRITISH DESTROYERS IN THE NORTH SEA

Despite our preoccupation with the war in the air, actions at sea are still continuing—and greatly redounding to the credit of the British Navy. One recent engagement—only one of many during the past few weeks—took place between a German force consisting, so far as could be observed, of six enemy armed trawlers with three E boats and a British destroyer detachment consisting of H.M.S. *Malcolm* (Captain T. Halsay, D.S.O.), the flotilla leader, and H.M.S. *Verity* (Lieut.-Commander R. H. Mills). This engagement took place in the North Sea. The results were difficult to assess, for the enemy resorted at once to smoke screens to make their escape, and smoke screens are most effective in a searchlight beam! But it is believed that one trawler and one E boat were sunk before the enemy force was able to withdraw. What the E boats and trawlers were doing in concert is not known; but to have the slowest and the fastest craft afloat working in conjunction shows that some operation of importance was in progress

THE MEN WHO ARE DIRECTING THE WAR IN THE AIR

The Air Council in Session at the Air Ministry in London

In the above picture, the first of its kind to be published, are seen the following: From left to right (second from left) Air Vice-Marshal A. G. R. Garrod, O.B.E., M.C., D.F.C., Sir Harold G. Howitt, D.S.O., M.C., F.C.A. (Additional Member), Air Marshal Sir Christopher L. Courtney, K.C.B., C.B.E., D.S.O. (Air Member for Supply and Organisation), Air Marshal E. L. Gossage, C.B., C.V.O., D.S.O., M.C. (Air Member for Personnel), Captain H. H. Balfour, M.C., M.P. (Under-Secretary of State for Air, and Vice-President of the Air Council), The Right Hon. Sir Archibald Sinclair, Bart., P.C., C.M.G., M.P. (Secretary of State for Air, and President of the Air Council), Air Chief Marshal Sir Cyril L. N. Newall, G.C.B., C.M.G., C.B.E., A.M. (Chief of the Air Staff), Sir Arthur Street, K.B.E., C.B., C.M.G., C.I.E., M.C. (Permanent Under-Secretary of State for Air), Air Chief Marshal Sir Wilfred R. Freeman, K.C.B., D.S.O., M.C. (Air Member for Development and Production), Sir Charles Craven, O.B.E. (Civil Member for Development and Production), Mr. R. H. Melville (Private Secretary to the Secretary of State for Air), and Flight-Lieut. W. W. Wakefield, M.P. (Parliamentary Private Secretary to the Parliamentary Under-Secretary of State for Air). This picture has only just been released for publication by the authorities; since it was taken both Captain Balfour and Flight-Lieut. Wakefield have flown to America

THE "FEAR-CRAZED ENGLISH" AND THE AIR RAIDS

Many references have been made by German newspapers to the "fear-crazed English" and to the terror that has been witnessed in London streets. Broadcasting on August 19, a German announcer had the following comments to make—"The population of London now consists of a long exodus of exiles; the whole of South and South-West London is now a heap of smouldering ruins and the war has not attained its apogee. Hospitals are full of injured, shivering with fear." Well, well! The above picture was taken on Monday afternoon, August 26, in Fleet Street, a few minutes after an air-raid warning had been given. Of course, the streets should have been empty; it is foolhardiness of the worst description to remain in the open once the sirens have sounded. Nevertheless, the "fear-crazed English" are standing at street corners and outside their offices watching for any signs of hostile aeroplanes, whilst other people seem to be going about their business quite calmly. The information conveyed over the German wireless must have come from a very strange source!

TELLING the NEWS to AMERICA by RADIO

How the News Transmissions from Broadcasting House Are Sent Over the Ether

Described by GORDON BECKLES

"THIS is Bill Hillman speaking from London. It is fifteen minutes past midnight here, the beginning of the 345th day of the war, which will soon be a year old. It is several centuries old in the changes brought about or threatening to be brought about. We may see the map of Europe modified and altered many times. . . ."

The lips of the man on the other side of the table are moving, but the voice comes back into your headphones via America. It is the voice of one of the men who descend into the B.B.C.'s dungeons at all hours of the day and night to tell America how the war is going—and tell it in the phrases and accents of America.

Everyone knows the various Lord Haw-Haws; but how many know the names of Fred Bate, Ed Murrow, Bill Hillman, John Steele, Eric Sevareid, and others of the corps of American broadcasters in Britain, who number their audiences by the hundred million?

They are vastly more important than Haw-Haws to the British cause, these men whose voices counsel, advise and explain the way of things across the breakfast tables and hearths of the United States, yet always maintain a strictly American viewpoint.

ONE OF THE MEN WHO TELL AMERICA WHAT IS GOING ON IN BRITAIN: Broadcasting regularly from London to America over the Columbia Broadcasting System's network is tall, good-looking Edward R. Murrow, the European Director of the System. He speaks twice a day, and informs the American public—25,000,000 probably listen to him—in quick, accurate word-pictures. His transmissions are sent from Broadcasting House. All Mr. Murrow's talks—as, indeed, are all the talks from London to America—have to be censored

Here are some of them now in this untidy little room from which Bill Hillman of the National Broadcasting Company is speaking his piece. The atmosphere is 100 per cent. American. Although not hot, all the men as they enter the room immediately take their coats off and roll up their sleeves. That is the American approach to work of any sort. Even the censor removes his coat, but being British he wears braces.

It is far down under the ground. First you pass into the cage erected in the B.B.C.'s front hall, past the steel-helmeted sentries. Then you are shot down by lift, to leave which you must step through the first of many steel doors. A Home Guard, wearing his helmet, even at this depth, puts his double-barrelled gun under his arm to examine your pass. More steel doors and a strange feeling that you are walking about the seamen's flats of a battleship; and finally the room in which the Americans work. It is scarcely a studio. The furniture scattered about gives it the appearance of a small attic. A green curtain is strung half way across its width, and in the shelter thus made is a table on which stands the microphone. No flowers, no pretty pictures, no shaded lights, none of the B.B.C.'s drawing-room camouflage, so conducive to calm accents and Oxford poise. This room reminds you of the B.B.C. in Marconi House eighteen years ago.

You sit modestly in a corner of this cubicle and fit on the headphones. A jumble of sound comes through on the feed-back. It is the end of a Columbia Broadcasting System programme from New York.

A dark and suavely good-looking young man sitting at the table takes his eye off the clock for one moment to lean back and smile rather apologetically that "it's a different world over there." This is Ed Murrow, the star broadcaster of the Columbia System.

Through the headphones now comes the voice of the New York announcer telling the world that they are going to hear from Columbia's string of correspondents in the great European Capitals, etc., etc., and first that they would be hearing from William Shirer in Berlin.

Mr. Shirer says that the day has produced many stirring events in the greatest air battle of history, etc., etc., and that "according to the German version" seventy-nine British planes have been destroyed and only fourteen German have been lost. As the broadcast proceeds the figure of British losses ("allege the authorities here") creeps up to eighty-two British planes. When again the Berlin man uses the phrase "according to the Germans" somebody whispers: "Bill doesn't seem very convinced, does he?"

The atmosphere becomes more intense. Hillman of N.B.C. on one side of the table is to be the second to speak. At his side sits Fred Bate, the European head of the National Broadcasting Company. Murrow and these two men are normally rivals but not in times like these. Ed Murrow glances wearily up at the clock. The waiting is the worst part of it. Highly complicated arrangements, for these hook-ups are worked down to the second. Hundreds of stations are involved. The clock itself has a large second hand. Behind Murrow is the censor, a young man with the alert, but disinterested look of a referee in a boxing ring. There are no thrills for him. He has already read all that the broadcasters are going to say, and respects their integrity sufficiently to keep his hand away from the switch which at any moment can cut off a voice.

The last "so says the German account" comes from Berlin and the New York announcer tells his listeners that they will now hear London. Ed Murrow runs his tongue lightly around his lips and starts to talk in a pleasantly modulated voice.

"There was heavy air action to-day between Dover and Portland. The Air Ministry give the losses as forty German planes down and twenty-six British fighters . . . the communiqué indicates . . . according to British figures . . . the anti-aircraft crews claim . . ."

Then Murrow throws the news overboard and gets down to the daily picture of life in the British Isles as an American sees it to-day.

"Sunday is the day when those, who can, forget about the war—somehow the whole thing seems less real on Sunday. Those who can, try to get out in the country," he says. "Sometimes the sun shines. I drove out beyond Windsor this afternoon—that stretch of the Thames below the big castle on the hill was crowded with canoes, punts, and small sailing craft—people were swimming or just lying in the meadows—those pleasant green fields criss-crossed with ditches or studded with 10-ft. wooden posts to prevent German planes using them as landing fields.

"At Eton there was a cricket match being played by men dressed in white flannels on a field that looked like a huge putting green—in a vacant lot nearby a squad of Home Guards dressed in civilian clothes took turns stabbing bayonets into a sack of straw. They looked serious and determined—almost in the shadow of the castle the wheat and oat shocks stood in close order on a carpet of yellow stubble—the yield won't compare with Minnesota or eastern Washington but it's a good crop—six small boys were sliding down a strawstack and I wanted to join them. A flight of Hurricanes hurried across the sky and one lone Wellington bomber came lumbering in from the coast. There were a few soldiers in the small villages but the war seemed far away." Murrow's voice is quite conversational in tone now. He is just chatting. "At tea time we stopped at an old inn built in Queen Elizabeth's time; it was crowded—tea for two, including sandwiches, bread and butter and pastry cost about 1 dollar, not much more than it cost there a year ago. Coming home the road was crowded—mostly with bicycles; many of them were tandems with a small child riding in a side-car.

"Back in London we passed the big sports arena at White City—that's where most of the French soldiers in London are living; a few of them in their ill-fitting uniforms stood forlornly at street corners as though afraid to venture too far from their base. Many of them are waiting to be sent back to France—few of them speak any English, practically none knows what has happened to his family. I think many of those peasant boys want above all else to go home to their own village, their own fields, and their own families. Two of them were standing outside a milk bar puzzling out the sign—their expression said more clearly than words what manner of people are these who have no cheap cafes and who drink milk . . ."

With a deep sigh of relief Murrow leans back in his chair, stretches his arms out, yawns and looks over at Hillman with a "there-you-are-now-it's-your-damned-turn" look at his rival. Murrow has been broadcasting twice daily since the war started. Sometimes many more times than twice during the battles in France.

Hillman has a different broadcast manner. He eyes the microphone with the look of a counsel speaking to a sceptical judge. He appears to be trying his sentences out, but as the microphone never rebuts him, the effect achieved is interesting.

"President Roosevelt has decided to send an admiral to London to make a special study of the naval problems developing because of the airplane," says Hillman. "I expect a general and some army experts of distinction may also be sent. Colonel Donovan recently made a hush-hush trip here. In some quarters he is talked of as the new Colonel House. He certainly learned all about British war plans, although I imagine the reports of your ambassador here made those clear. The admirals and the generals and Colonel Donovan awaken memories of a certain Wilsonian phase before the United States entered the last war." On this, he pauses and looks at the mike as if it might suddenly ask "What exactly is the significance of that last remark?"

"If admirals and military men are being sent, why not send men to study the social and economic and revolutionary phases of this war? These military men will miss the point of this war unless it is realised that in effect the military phase is only a part of a more significant struggle going on."

Hillman in turn sighs relief, and Bate begins to talk privately over the radio-telephone to his New York office. "Hullo, Bob . . . sure . . . Anthony Eden on the fourteenth, will you book it? . . . absolutely . . . well, say good night to all the boys . . . good night, Fred. . . . good night, Bob."

Thus comes to an end one of the daily £2-a-minute sessions. Fred Bate is what the Americans call the dean of this profession of American commentators. He is a lean and studious man of middle age, with the features of an ambassador or professor. When he wants expert information he goes direct to the Cabinet Minister concerned. Every morning he sits down with a big carbon-copy book in front of him and in long-hand sketches out the matter for the one o'clock broadcast which catches the bulk of America just after it has been reading it's morning paper headlines.

A month before it loomed in the news he anticipated and explained the present move to provide food for Nazi-occupied countries; he himself is not in favour of such a demonstration of American generosity. He has clearly defined views on objectivity. One example, he says, was when the Germans before the war branded Churchill, Duff Cooper and Eden as "Warmongers." The news had scarcely come off the New York tape-machines before he was cabled to get Churchill, Cooper and Eden to refute the charges; all three were delighted to do so. Just now he is giving his company's "air" to leaders of the Churches in this country that they may explain the spiritual issues of the war.

When the water (not iced) is finished and the manuscripts handed back to the censor, the Americans join the B.B.C. men in the underground cafeteria. There they find men like Wickham Steed, Howard Marshall, Leslie Howard, J. B. Priestley and George Slocombe who regularly broadcast on what is called the "North American Transmissions."

But these men are British. America listens to them as propagandists. The others—Bate, Murrow and Hillman—are their fellow countrymen, daily defying the temptation to be partial, or prejudiced and tainted with pro-British feeling.

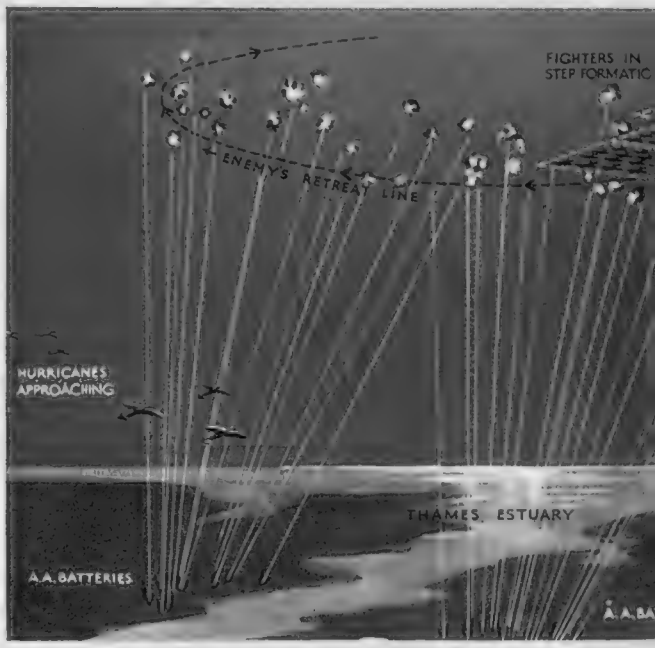
b

WAR in the AIR : *Artists' During*

Above—**KILLING TWO BIRDS WITH ONE STONE**

During one air attack more than forty German bombers came over, accompanied by Messerschmitt fighters. After being harassed by anti-aircraft fire, they broke formation and scattered: it was then that a well-placed A.A. shell exploded between a Jaguar and a Dornier bomber, bringing both to the ground with the one shell. The Jaguar's tail was shot clean off, and the Dornier's load of bombs exploded, bursting the plane into pieces

—Drawing by E. G. Lambert



Below—

NEW TACTICS OF THE GERMAN RAIDERS

In the recent fighting over Britain, it was discovered that one of the new tactics employed by the Nazi bombers was an attempt to trick our airmen by the use of smoke screens in the sky. It is thought that the employment of smoke screens is either a means of concealing the attacking planes or to divert the attention of the defence from the exact direction of an impending attack

—Drawing by Montague Dawson

Impressions of Recorded Incidents the Recent German Air Attacks

Above—**THE SEARCH-LIGHT CREWS GO INTO ACTION**

In one area alone three German planes were shot down by light anti aircraft fire. The Lewis gun crew opened fire when a Messerschmitt attacked a Hurricane, which in its turn was attacking a Dornier 215. The search-light crew opened fire on the Dornier at 1,000 ft. Three other searchlight posts also went into action and the Dornier crashed, killing two and injuring a third

—Drawing by Roland Davies

On right—

HOW A BALLOON BARRAGE BEATS THE DIVE-BOMBER

It is obvious that dive-bombing cannot be accomplished through an area guarded with the almost invisible cables of a balloon barrage. This diagram drawing shows four chances of certain destruction for the raider in one imaginary dive

Drawing by Roland Davies

Above—**RIGHT-ABOUT-TURN WHEN BRITISH FIGHTERS CAME INTO VIEW**

Seventy German bombers paid our A.A. gunners the biggest compliment in their power — they turned back. The enemy were in four groups, forming a large rectangle. Forty of them were Heinkels, and the other thirty Dorniers. Behind them flew their escorting fighters, stepped up in tiers. As they approached the outer part of the Thames estuary they were received with a hail of shells. At this moment a patrol of Spitfires was approaching, ready to finish off whatever of the enemy had braved the terrific fire. They were just in time to see the enemy's retreat. As one pilot said, "The whole formation just turned and went back"

—Drawing by E. G. Lambert

On right—

"FRIGHTFULNESS" FROM A LOW-FLYING BOMBER

A motor-cyclist and his wife, having an alfresco lunch in a south-east area during an enemy raid on the district, narrowly escaped being machine-gunned by a German airman. They flattened themselves against some bushes and watched the raider spraying the spot where they had been with his machine-gun. When he had passed they dashed to a cottage for shelter against further possible attacks

—Drawing by Roland Davies

ALUMINIUM—

Whence the Ore Comes, and How It Is Treated

By EDWIN H. JUDD

THE response of British housewives to the recent appeal for aluminium utensils and vessels of all kinds was both immediate and generous. The need for this effort was due to the fact that one large potential source of bauxite, from which aluminium is manufactured, was France, and the collapse of that country transferred that source to the control of our enemy. In 1938 France produced some 680,000 tons of this valuable mineral ore, or 17 per cent. of the world's total.

In recent years aluminium has become increasingly used for innumerable purposes, chiefly on account of its lightness and cleanliness, but the most effective use for this metal when war in the air occupies the front page place is in the construction of aeroplanes, where combined lightness and strength are of paramount importance.

Though, with the exception of silicon, aluminium is the most abundant metal in the world, and some of its natural components were used for dyeing purposes 2,000 years ago, its economic manufacture and value as a constructional metal only goes back about sixty years. The modern process of its extraction from the ore at a commercial price is the development of a discovery simultaneously made in 1886 by Heroult in France and Hall in America, by which a molten solution capable of yielding aluminium by electrolysis was produced.

The mineral ore mostly used for producing aluminium is bauxite, which is found in many varieties and distributed more or less in all parts of the world. The largest of these deposits in Europe are found, in order of priority, in France, Hungary, Yugoslavia and Italy, which in the aggregate form more than half the world output, with the present result that Germany, though with very little of it in her own frontiers, now has direct or indirect control of about half of the world's total sources of aluminium. This leaves out of account Russia's fairly large supplies, which she is not at the moment just inclined to put into Hitler's pocket.

On the other hand, our own demands—of which much came from France before her downfall—now have to be obtained from overseas, the supplies from the north of Ireland being quite small. The main sources are British Guiana, Dutch Guiana, the Dutch East Indies and the United States, while small quantities can be got from Greece and British Malaya. The combined products of these countries amounts to about 45 per cent. of the world's total.

From the world's total of bauxite ore of nearly 4,000,000 tons some 580,000 tons of aluminium is manufactured, but most of the manufacturers of the metal have to import the ore in some form or another.

The manufacture consists of several stages, such as crushing and grinding the ore, "digesting" the crushed product with caustic soda in autoclaves (closed vessels working under a pressure of 60 to 70 lb. per sq. in.) and roasting, or calcining, the hydrated alumina, which then leaves the alumina in a fine white powder ready for treatment in an electric furnace.

It is at this stage that the big hydro-electric power stations associated with the industry are required. The electric current required is of enormous volume, but at a very low voltage, of from 5½ to 6½ volts for each furnace, several of these being connected up in series, and consequently must be produced as cheaply as possible. This explains why most of the manufacturing works are in the vicinity of great water power sources; in France and Italy close up to the Alps, in Norway and Sweden, Switzerland, the U.S.A. and Canada, while in Britain the largest hydro-electric power schemes are those of the British Aluminium Company at Kinlochleven and Lochaber in the Highlands of Scotland.

At Lochaber the water supply is carried through a 15-ft. diameter tunnel driven 15 miles through the Ben Nevis range, and capable of passing 860,000 gallons of water daily, an amount sufficient to meet the domestic requirements of half of Great Britain.

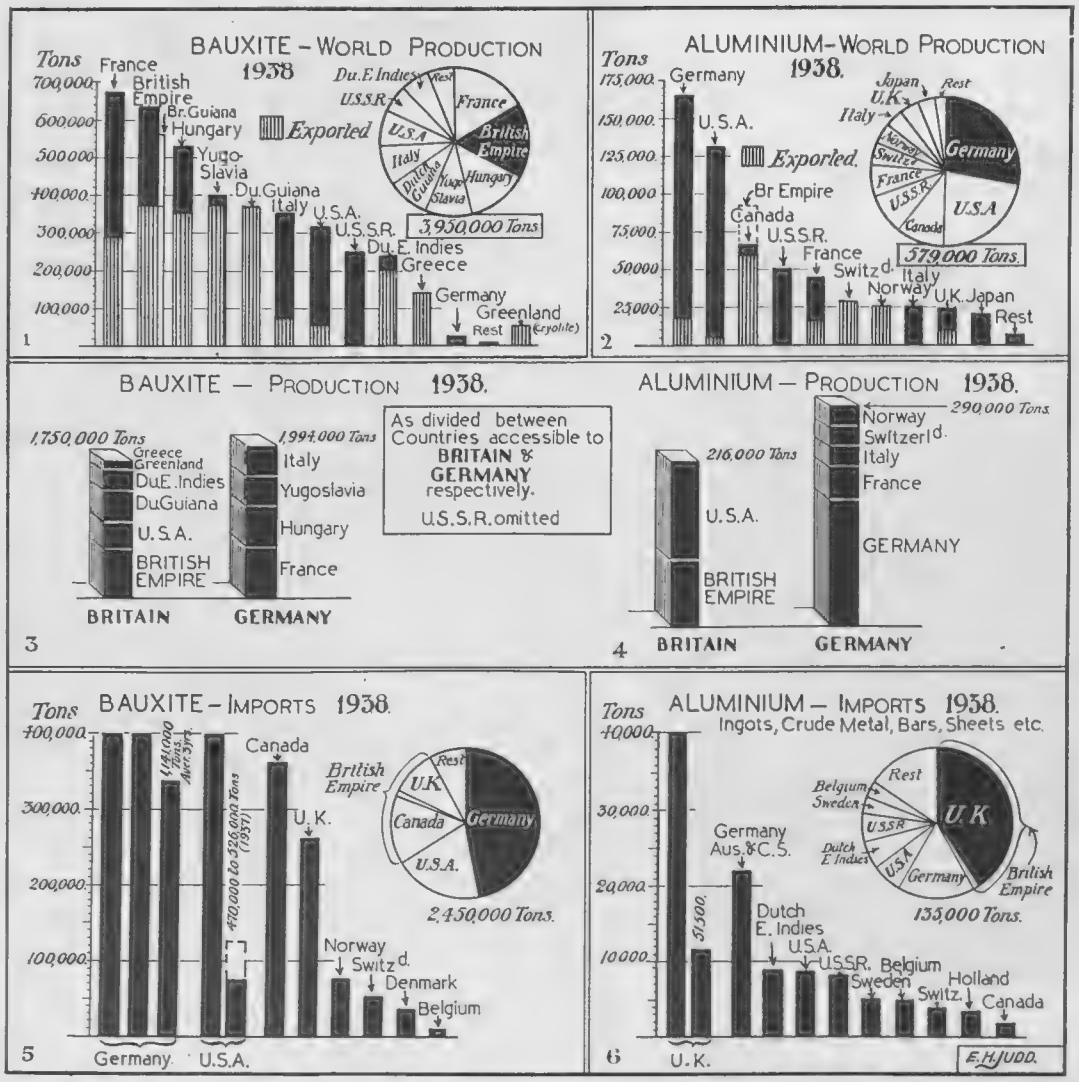
The electric furnace, simply stated, is a large rectangular open bath, lined on the sides and bottom with specially prepared carbon. The current is fed into the bath by numerous carbon block anodes which dip into the open top of the mixture of alumina and cryolite, and led away through the carbon bottom which forms the cathode. The whole mixture is fused, and kept in a molten state, by the electric current passing through it. The consumption of carbon is enormous and forms a big item in the cost.

The metal is deposited in a molten condition on the furnace floor, tapped off at intervals, and run into ingot moulds as cast ingots. Further refining processes follow according to the nature of the final form of the aluminium desired, whether for sheets, rods, wire, castings, forgings or stampings.

The physical qualities of aluminium which make it so valuable are its extreme lightness—being nearly one third the weight of steel, and less than a third the weight of copper—its freedom from corrosion, its ductility and its cleanliness. Though in its usual form its strength is much less than that of mild steel, certain alloys of aluminium such as duralumin (which contains 95 per cent. aluminium, 4½ per cent. copper, ½ per cent. manganese and ½ per cent. magnesium) have, when forged and heat-treated, a tensile strength of from 25 to 30 tons per sq. in., or equal to that of ordinary mild steel, yet still retaining its lightness.

Its resistance to corrosion makes aluminium particularly suitable for vessels used in chemical processes, domestic utensils, small boats, internal decorative metal and a thousand minor applications. As a conductor of electricity its electrical conductivity is about 61 per cent. of that of copper, but as copper is three times its weight, 1 lb. of aluminium conductor is equivalent electrically to 2 lb. of copper. The "Grid" which covers all Britain uses 20,000 miles of aluminium conductors, reinforced with a steel wire core, and involving some 12,000 tons of aluminium.

In transport vehicles, whether on rail or road, the reduction of dead weight means greater carrying capacity or useful load, with reduced running costs, so aluminium is used extensively in the construction of light trains as railcars, tramcars, buses and lorries. As much as 4½ tons has been saved in the weight of a tramcar by the judicious use of this metal.



1. The total world production of bauxite, the ore from which aluminium is extracted, 1938.—Bauxite is an earthy mineral, from white to a reddish colour; very irregularly distributed over the surface of the earth. It gains its name from Baux in Southern France where a large deposit of bauxite is to be found. From the mineral is extracted aluminium and alum, and a residue is used in the making of fire bricks.

The above diagram shows that in 1938 the world's total mining of bauxite amounted to nearly 4,000,000 tons. The columns show the amount of bauxite obtained from mines within the countries named. Thus the British Empire mined over 600,000 tons, consumed the portion shown in black and exported the amount shown by the upright lines. Germany within her own borders, it will be noticed, has very little native supply of bauxite. British and Dutch Guiana are, on the other hand, very rich.

2. The total world production of aluminium, the gleaming white metal now put to so many uses on account of its lightness.—In 1938 the aluminium works of the world produced 579,000 tons of the white metal. Germany was the biggest producer, followed by the U.S.A. Both countries exported a small amount of the metal extracted. The British Empire comes third in the list, the United Kingdom coming ninth; there is the big Lochaber water-power works in Scotland and another big works in England for the extraction of the metal.

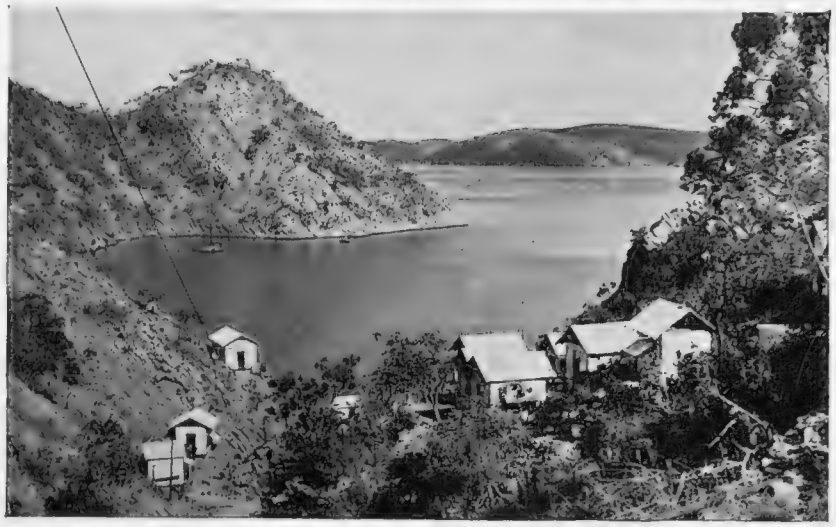
3 and 4. Bauxite mineral available to Britain and Germany in war-time.—On the left, in a series of black blocks, the amounts of bauxite mineral which can be reached by this country are indicated. The Empire and Dutch Guiana are the largest present sources of available supply. Germany can obtain supplies from Italy, Yugoslavia and Hungary and of course French bauxite is now within her control. Of the actual metal produced, based on the 1938 figures, 216,000 tons is extracted in the territory reachable by us: Germany could have access to 290,000 tons in the countries indicated.

5. The bauxite mineral which was imported by various countries to supply their aluminium works with the necessary raw material. — Various countries in 1938 imported 2,450,000 tons of the mineral, Germany being by far the largest importer. She took in an average of 1,141,000 tons. She was followed by the U.S.A. whose native supplies of bauxite were increased by some 500,000 tons. Canada and the United Kingdom were both big importers.

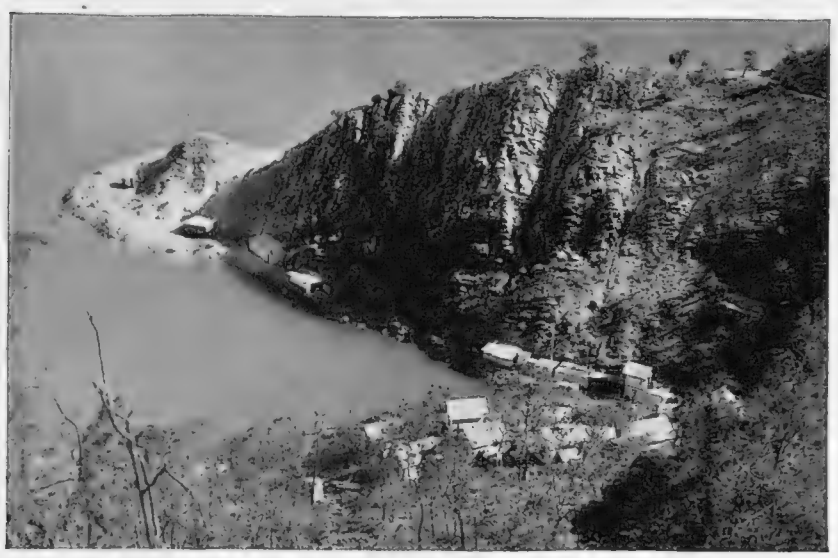
6. Aluminium imports, showing how the United Kingdom relied on bringing in ingots and crude metal aluminium.—This diagram shows the United Kingdom as the largest importer of aluminium in various forms of the metal. Ourselves and Germany, shown with Austria and Czechoslovakia, head the list, all other countries being small importers.

The distribution of Bauxite deposits in Europe, America and Asia. — Bauxite deposits are richest in Europe; in the two Americas, the deposits in British and Dutch Guiana have a high yield; smaller supplies come from British Malaya and Dutch Indies. There are no deposits in any part of Africa

IRON ORE IN W. AUSTRALIA



ARBITRATION COVE ON KOOLON ISLAND (IN THE BUCCANEER ARCHIPELAGO), WHICH IS THE CENTRE OF VAST IRON ORE DEPOSITS. JAPAN'S PROJECT OF BUYING 1,000,000 TONS A YEAR HAS BEEN BANNED



THE ORE DEPOSITS AT YAMPI SOUND ARE EASILY ACCESSIBLE: DEEP WATER ENABLES SHIPS TO LIE CLOSE TO THE CLIFF WHILE ORE IS SHOT INTO THE HOLDS

UNLOADING STORES FROM A LUGGER ON COCKATOO ISLAND, ONE OF THE IRON ORE ISLANDS IN THE BUCCANEER ARCHIPELAGO

ONE OF THE JETTIES ON KOOLON ISLAND, THE ROCK OF WHICH IS 65 PER CENT. PURE IRON

Iron ore is found in large quantities in Australia; but, of known deposits scattered over a wide area, only two are easily accessible — Iron Knob in South Australia and Yampi Sound in Western Australia (where these pictures were taken). The limited nature of these deposits has focused attention on the future development of Yampi Sound, particularly in view of the important part possession of iron ore now plays in international affairs. The Australian Federal Government have imposed a ban on the export of iron ore, as it was computed that in little more than a generation Australia would become an importer instead of an exporter of this commodity. Before the ban, however, the Western Australian Government had entered into a contract with an Australian Company, backed by Japanese interests, for the development of part of the Yampi deposits; its further development will probably be decided when the Government has considered the findings of the Survey it has instituted. Yampi Sound was first visited by William Dampier in 1688; he could not then have foreseen that the grim, rocky islands just off the coast would one day be worth millions. Yet, across King Sound from him, were millions of tons of almost pure iron. Koolon Island, 10 miles long, is roughly a mile wide, but its maximum breadth is 3 miles; at its highest point it is nearly 700 ft. high. The entrance to Yampi Sound is three-quarters of a mile wide; fast, dangerous tides rip through it. The Sound itself is 10 miles long. Koolon, Cockatoo, and Irvine Islands are almost all pure iron!

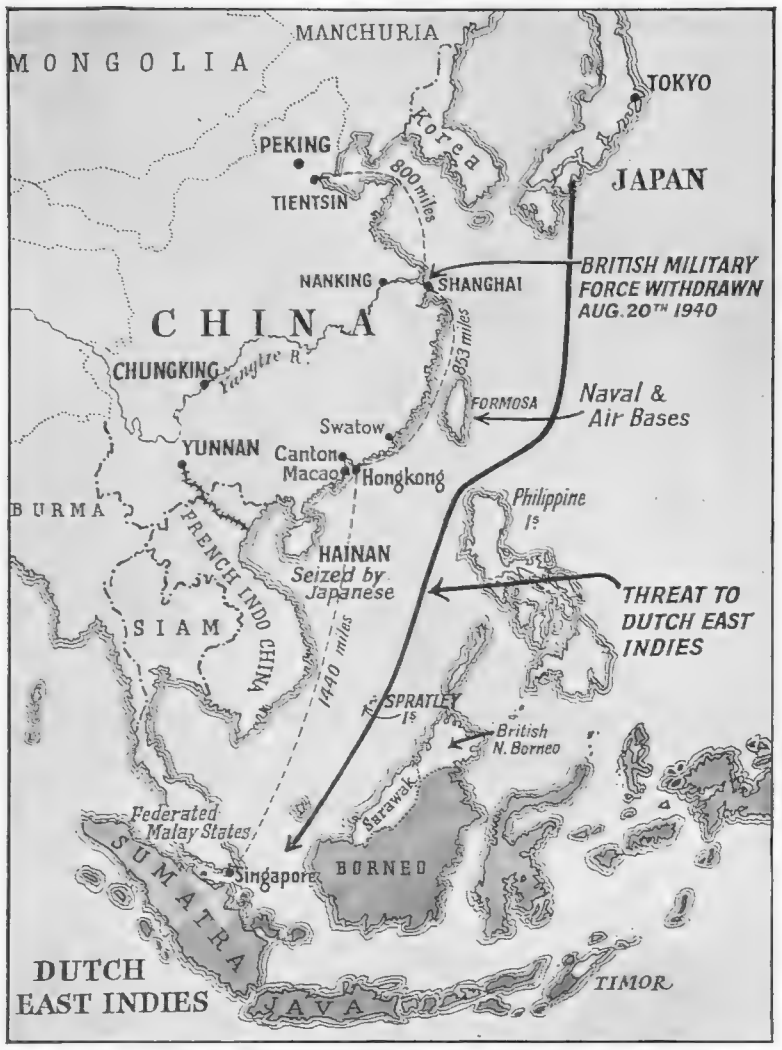
NAZI PLANES FOR SCRAP

A HUGE SCRAP HEAP WHERE WRECKED NAZI PLANES ARE DUMPED; THE PAST THREE WEEKS HAVE BROUGHT ABOUT A CONSIDERABLE INCREASE!

WORKMEN ENGAGED IN THE TASK OF BREAKING UP NAZI WARPLANES. THE ALUMINIUM AND OTHER METALS ARE USED FOR OUR OWN WAR NEEDS

SECTIONS OF FUSELAGE, RIDDLED WITH BULLET-HOLES, ARE REMOVED BODILY

One result of the air *blitzkrieg* over Britain has been the sudden increase in the size of our metal dumps! So many aircraft have been brought down actually over England (apart from those which have been shot down into the Channel) that the metal of which they are constructed has formed a very substantial contribution to the National Scrap Metal Salvage Campaign. After the wrecked aircraft have been stripped of their valuable instruments and equipment they are passed on to the various metal and produce recovery depots; here they are further broken up and the metals prepared for use *against* the enemy!



THE DUTCH EAST INDIES ARE NOW ON THE EDGE OF THE DANGER ZONE IN THE PACIFIC: From far-off Japan forces have already reached Hainan, off French Indo-China. The threat to Holland's possessions in the Dutch East Indies is thus a very real one—and, comparatively nearby, are our own huge naval base and possessions at Singapore. How far Japan dare go in these Pacific regions is discussed in the article by Mr. Jackson printed here

The THREAT to DUTCH EA

The Possibility of Japan Expanding Her Thrust Into the

By STANLEY JACKSON

WILL the present European conflict develop into a world war? Recent developments suggest that the question may be answered not in Washington but in Tokyo. Japan's proclamation of a new order in the Pacific; the temporary closing of the Burma Road; the withdrawal of British troops from Shanghai; the blatant acts of provocation by the new Fascist Government in Tokyo; such, in brief, is the sequence of events which leads one to suppose that Japan means to exploit the present European situation for her own Imperialistic purposes.

Fishing in troubled waters has long been a favourite sport of Nippon's diplomats and militarists. When President Wilson was in the full tide of avuncular benevolence at Versailles Japan took the opportunity to claim a mandate over a group of islands which brought her within striking distance of British New Guinea and the American-controlled Philippines. These islands were promptly fortified and equipped as air and naval bases.

The ill-fated Munich settlement was the signal for the Japanese to seize Canton and consolidate their position in Southern China. A few weeks later, when General Franco took Barcelona, the war lords took Hainan, which now threatens Indo-China with a garrison of at least 100,000 men. Finally, when Hitler tore up the Munich agreement and overran Czechoslovakia, Tokyo profited by the European crisis by taking the Spratly group of islands, which brought her hundreds of miles nearer to Singapore.

It would be idle to pretend that this opportunism has not provided handsome dividends. Even a brief glance at the map shows how Japanese expansion has brought her air and naval bases ever closer to British and American fortresses in the Pacific. Aircraft and submarines would be decisive factors in any single engagement. Recognising this principle, the Japanese have equipped each of their isolated territories in the Pacific as a coaling station, landing field, submarine base and dockyard.

Nothing has apparently been overlooked to secure good jumping-off places for offensive action. The Kuril Islands, in the extreme north, have been equipped as air bases. These are only three hours flying time from American territory. Formosa offers a springboard for naval and air units operating against the Philippines. The tiny island of Macao has been converted into an air base which threatens Hong Kong and French Indo-China. Once the Japs secured control of Manila Bay they would be within 1,500 miles of Singapore.

The events of the past few months have whetted the appetites of the Japanese leaders. They see before them the rich territories of the Dutch East Indies and French Indo-China, possession of which would not only provide vast sources of food and raw materials but would add greatly to Tokyo's strength on the chessboard of the Far East. Such a prospect, reinforced by the exhausting war in China, leaves the island empire at the cross-roads of her destiny.

Should Japan temporarily "liquidate" the Chinese adventure and stretch out for the plunder that lies so temptingly at hand; or is it wiser to fight to the bitter end in China and "clean up" in the Pacific when the democracies are too war-exhausted to raise a finger in protest? Such, briefly stated, is Nippon's problem to-day. If the Japanese war lords decide to go all out for a looting campaign in the Far East, involving British, American, French and Dutch interests, what are the prospects of success? To understand them clearly one must look at Japan after three years of hard fighting in China.

Anyone who has been in Japan within the past two years will agree with me that the country is in desperate straits. The China war has not solved the population problem. With 72,000,000 people—still increasing at the rate of 1,000,000 a year, despite the war—Japan is the most densely-populated country in the world. The vast new markets which were expected to result from the war have not been realised. Japanese magnates have exported their plant to China and prefer to employ local labour at slave rates.

The sons and daughters of victorious Nippon have gained little from the 1,000,000 sq. miles of occupied China, except longer working hours in their factories, more acute poverty, soaring taxes, and a still more depressed standard of living. Everywhere there are evidences of the shortage in raw materials. The country is swamped with synthetic materials. "Silkool," a shoddy fabric made from oil cake, is the basis for clothing. War pressure has resulted in an acute shortage of rubber, wood, steel, copper, petrol, oil, paper, cotton, leather, coal, tin, rubber and nickel—to name only a few of the more obvious deficiencies.

The pinch of poverty is apparent on all sides. The war has cost, it is estimated, in the region of £1,000,000 daily. The national debt has practically doubled since the seizure of Manchuria. Even more serious, from the point of view of war economy, is the decline in exports, which make it still more difficult for Japan to pay for the raw materials she needs for her factories and munition plants. Europe's preoccupation with war, coupled with America's embargo on petroleum exports, have made it hard for Japan to get the supplies she needs to keep her war machine geared.

Japan's silk trade has been hit by synthetic materials like nylon, now being mass produced by the Americans. She also feels the pressure of hostile world opinion. Foreign bankers are showing more and more reluctance to invest gold in the doctrines now being preached by the reactionary leaders in Tokyo.

It would be wishful thinking of the most dangerous order to imagine that the Japanese masses may soon be driven to upset their war lords. Weary as they are of war, the Japanese are fanatically patriotic, conscious of their destiny, and

A STRAITS-BORN CHINESE BRIDE is prepared for the marriage ceremonies by her Singapore friends

MODERN SINGAPORE IS A HIVE OF INDUSTRY AND COMMERCE: This picture shows the wonderful modernity achieved in recent years by our great possession facing the Dutch East Indies. Amongst the great buildings seen here are the War Memorial, part of St. Andrew's Cathedral, and the Municipal Offices. The Victoria Memorial Hall is just beyond the Esplanade

SINGAPORE ISLAND, THE STRAITS OF MALACCA, AND THE HUGE NAVAL BASE, SEEN FROM THE AIR

ST INDIES

Area of British Influence

even more rigidly disciplined than the most rabid supporters of Hitler or Mussolini.

But whether Japan's economy could stand up to a long and expensive war in the Pacific, confronted by the resources of the great democracies and, possibly, Russia, is open to grave doubts.

Strategically, as I have suggested, Japan is in a favourable position to attack British and American bases. What of her armed strength? With a standing army of 1,500,000 and a potential trained reserve of another 5,000,000, she is in a favourable position to repel invasion or to launch attacks against Indo-China, the Philippines, or Malaya. The army is excellent in both discipline and the team spirit, and it has never been defeated.

The navy is not nearly as strong as our Pacific Fleet and that of the United States, but it is a formidable force, nevertheless. An ambitious programme is scheduled to increase the existing strength by five more 40,000-ton battleships, armed with 16-in. guns; at least eight 10,000-ton cruisers; and two more aircraft-carriers. Submarines are also being built, it appears, to supplement the four types already available—the cruiser class (with a displacement of 2,500 tons); the 1,400-ton high-seas type with half a dozen tubes and a 4-in. gun; the minelaying class; and the smaller coastal type which carries four tubes and a 3-in. gun.

Aircraft factories are working night and day to turn out long-range bombers and A.A. guns. The air force is still something of an unknown quantity, but its record in China does not suggest super-efficiency in either the quality of the pilots or the machines.

Finally, what is Japan up against if she decides to stake all on a spearhead thrust to the south? Lord Roberts used to say that the history of the world might one day be decided at Singapore. Our military and naval chiefs have taken his words to heart. This great base is the Gibraltar of the Far East, a veritable fortress isle with docks which can take the largest ships afloat, formidable land batteries, underground arsenals and oil tanks, and excellent landing places for planes and flying boats.

(Continued on following page)

ALL CARRY UMBRELLAS IN CHAMBERLAIN STREET, SINGAPORE

Oddly enough, in Singapore's Chamberlain Street it is usual for the better class Chinese always to carry umbrellas! The Chinese population, to a large extent, dominate life in this part of the Orient. The picture reproduced *below* shows the garden of a wealthy Chinese merchant of Singapore. The visitor wanders round curving ways, gazing down at miniature houses, set among diminutive hills—all built at a fabulous cost

The great cosmopolitan port, the centre of the Orient and the meeting place of shipping routes from all over the world, is situated on an island which is 28 miles across and 14 miles wide. The various harbours and waterfronts are to the south, whilst the great British naval base lies across the island, some distance from the city. It is here that vast sums of money have been spent in recent years in making this spot a stronghold of the Orient. Singapore was founded as recently as 1819, and the island was formally included within the British Empire in 1824. The population is very dense, approaching 500,000 of whom less than 10,000 are Europeans and Americans. Lying as it does in one of the most strategic points in the whole world, the importance of Singapore in world affairs is immense

THE THREAT TO THE DUTCH EAST

ANCIENT CUSTOM STILL RULES ON BALI: This decorative offering is carried on the head of a young Balinese girl in thanksgiving ceremonies after the passing of evil spirits. *Below* is an example of the rich carving which decorates the exterior of the Batak houses of North Sumatra

(Continued from preceding page)

Singapore will be a tough nut to crack. Attack from the sea would be little short of "hara-kiri" for the invader, who would have to face a deadly barrage from the long-range guns and dive-bombers. Submerged reefs all round the island are a lethal trap for submarines and other enemies.

Air raiders would meet with a hot reception from the numerous A.A. batteries. But Japan would doubtless rely upon an attack from the mainland of French Indo-China, an operation which, we may be sure, has been considered by our military authorities since the capitulation of France!

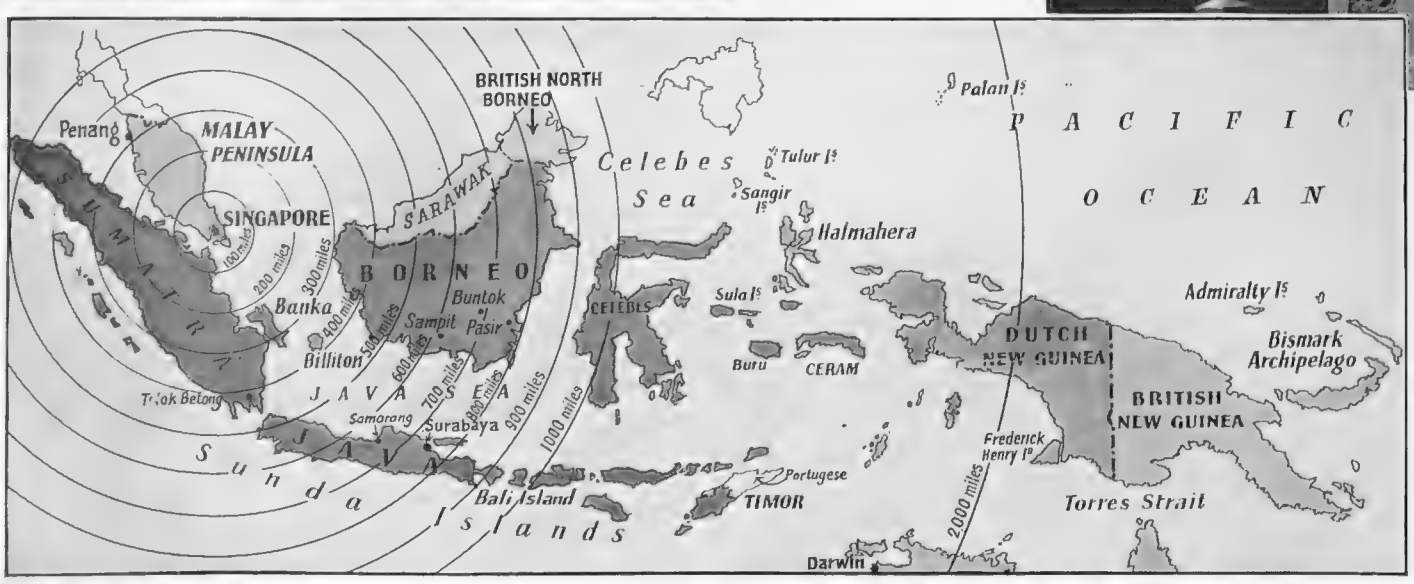
While Singapore remained intact we should be in an admirable position to harass Japanese shipping and blockade her trade. Only if the United States decided to clear right out of the Pacific and leave the Philippines, might Singapore become vulnerable.

But the very presence of the American battle fleet in Hawaiian waters is a salutary warning to wishful thinkers in Tokyo. And be it remembered that bombers, carried by aircraft-carriers, could inflict terrific damage upon the wooden cities of Japan.

Nor should it be forgotten that the Russian enigma must be worrying Japan as much as it has puzzled the European Powers throughout the first year of the war. Russia would not welcome a victorious Japan any more than an all-conquering Germany. Stalin never forgets that he has two frontiers, each jealously regarded by a potential foe. And Japan is equally aware that the Soviet bombers need only fly a few hundred miles from Vladivostok to raid Tokyo, Osaka, Kobe, and Yokohama.

Such are a few of the problems that are vexing the Japanese, a race little disposed to reckless gambling.

GRANARIES ON STILTS ARE RANGED ROUND A VILLAGE SQUARE roof of this granary is characteristic of the architectural form East Indies. The Bataks of Sumatra have developed the gre



THE GEOGRAPHICAL PROXIMITY OF THE DUTCH EAST INDIES TO SINGAPORE SEEMS TO LINK THEIR FORTUNES TOGETHER

The close proximity of Singapore to Sumatra, Java and Borneo has not been without its influence in the past. With the nearer approach of the Japanese towards these regions, it now takes on a new significance. Proximity is, however, only a comparative term, for the Celebes are 1,000 miles away and Dutch New Guinea 2,000 miles from the Malay Peninsula, as the circles, each of 100 miles, indicate in the map above

THE GRAVE OF A WEAL SUMATRA: Although influence of Europe ark-like coffin of st lit

THE DUTCH EAST

THE great wealth of overseas possessio Indies, where she he Moluccas, most of Borne were not regarded as co an actual part of Hollan

They are intensely Royal house, and never tous news arrived of th Country. Full support Government in London all that was possible to maintain the Dutch pow Nazi partizans were arre secret papers showing influence in high places. Indies have always had of the Dutch Navy, and air force. Great efforts

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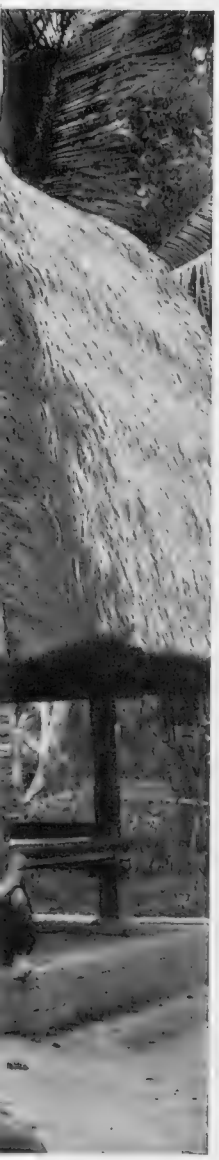

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A THANKSGIVING PROCESSION IN THE DUTCH EAST INDIES: There are many picturesque features about Javanese and Balinese life which have made a comparison with Japan possible. Influenced by Buddhist teaching, and more recently by Christian missions, the islanders still love their ancient ceremonies

and modernise the army, and the people have willingly borne heavy taxation.

At the beginning of the war Japan's chief interest was in maintaining the *status quo* in the East, with no interference from the belligerent powers. She wanted to finish off what she called the "Chinese affair" and for that she needed raw materials from the Dutch Indies—crude oil, iron and tin. In the early months of the war, when Holland was proclaiming neutrality, the Dutch East Indies insisted that they were asking help from no one, they were determined to be entirely independent. With 60,000,000 inhabitants, and vast material wealth, the Dutch Indies knew they were the mainstay of the Empire.

So matters continued till the tragic months of May and June, when Holland lay prostrate under the Germans and France capitulated. It was the golden opportunity for Japan to assert her power. Her tone at once became more imperious, and her demands on all sides were insistent. Britain was fully occupied fighting the might of Germany and Italy alone; French Indo-China lay apparently an easy prey; and the Dutch East Indies, left all alone, with all their wealth, looked very tempting. Japan accordingly stated a grandiose policy, covering East Asia and the Southern Seas, which were to remain a sphere of their own.

The main preoccupation of the Dutch Indies has been the furtherance of their commerce. Cut off from most of Europe, they have to depend upon Great Britain and their two best customers, the United States and Japan. However great the desire to help the Allies, the Dutch Indies must also sell to Japan to keep up their trade balance and obtain the money so much needed by Holland.

But this has not satisfied the growing ambitions of Japan, who look with envy upon the Dutch Indies. The special envoy from Japan to the Dutch Indies calmly asserted a few days ago that "the Netherlands East Indies have been exploited and oppressed for a long time. The construction of the new order in Asia requires that the Netherlands Indies be not left in their present status for ever."

THE HIGH-PITCHED ROOFS OF A DECORATED BATAK HOUSE

Sumatra can boast of some of the cleverest timber-constructed buildings to be found in the East. This one, built on wooden columns raising it from the ground, bows outwards, and has tapering roofs with a decorative cap between the four gables

GREAT GUNS

Some of the Fine Types Now in Use for Defence

Drawing by Montague Dawson

ON BOARD A BRITISH DESTROYER IN THE NORTH SEA—HERE THE CREW ARE SEEN LOADING ONE OF THE TWIN-BARRELLED 4·7-IN. NAVAL GUNS, used mainly for anti-aircraft purposes, with an effect that has been noticed by German raiders in recent days. This is not a new gun, nor are the barrels fired simultaneously, as is sometimes thought

A 6-IN. NAVAL GUN: Here we have one of the newest guns of to-day in position. It is made for use aboard ship, but quickly adapted to land work. British naval guns, it has been said, lead the world

HOW NAVAL GUNS ARE USED FOR HIGH-ANGLE FIRE AGAINST AIRCRAFT—A PICTURE FROM LIBYA: This picture is from a Movietone-Gaumont Newsreel. It is interesting as showing a gun's crew in action with a twin-barrel type of gun used for high-angle fire against aircraft. The heavy bolted piece of mechanism contains the recoil apparatus for the two barrels and adds the necessary strength to the gun in its rear position

ON BOARD A MINESWEEPER—THE GUN CREW USING HIGH ELEVATION AT HOSTILE AIRCRAFT: This high-angle 12-pdr. 3-in. anti-aircraft gun is here seen being operated on one of our doughty trawlers. The open sights for dealing with low-flying aircraft can be seen. The gun-layer "gets" the plane on the outside edge of the square and "makes" him fly into the centre, when the gun is then fired. Considerable improvisation has been necessary in the handling of these adaptable guns under service conditions, and they have put up a magnificent show. Probably it was one of these which brought down two German raiders with one shot the other day

THIS IS A 3·7-IN. ANTI-AIRCRAFT GUN, of the mobile type, similar to hundreds that are manned night and day by Britain's Home Defence units. A feature of this model is the peculiar structure just below the rearing muzzle; this is the "recuperating" gear, and it works on a system of compressed air and oil

A STATIC 3·7 A.A. GUN IN PALESTINE, shown from the front. The big ratchet underneath is part of the traversing gear, which is operated by a man who sits in front of the gun. It is interesting to note the length of the shells, which gives these guns their remarkable range

ANOTHER VIEW OF THE SAME GUN: The unusual feature of this 3·7-in. gun is the counter-balance weight at the rear. This is particularly useful for traversing the gun at great speed. The 3·7 of this type is, of course, static mounted, as opposed to the mobile guns

THE gun of the moment is undoubtedly the 3·7-in. A.A. This is the main weapon of our ground defences against air attack, and its performance so far has more than justified the confidence of its designers and the Higher Command. But surprisingly little is known about the actual construction of this latest addition to our defensive armament.

We first started to experiment with a view to constructing a modern anti-aircraft gun in 1928. Messrs. Vickers-Armstrong were eventually responsible for the "winning design," as it might be called, and that was the 3·7. The weight of the shell fired by this gun is 28 lb., but the muzzle velocity is such that aircraft flying at 40,000 ft. can be successfully engaged. Loading is best described as "semi-automatic," because whereas a hand lever must be operated to open the breech at first, the subsequent recoil-action of the barrel opens the breech of its own accord, compresses a spring and ejects the empty cartridge-case.

The ammunition waits on a tray at the side of the bore. When the breech is open this tray is brought in line with the bore, and the loader rams the shell home by a wire-operated ramming device. The gun is fired by a lever, operated by a number on the right. Afterwards the gun's heavy recoil is taken up by a compressed air brake, incorporated in a cylinder on top of the weapon. The gun is steadied for action by four metal feet, which are extended on either side and fastened to the ground. The maximum rate of fire is approximately 15 rounds per minute.

The first factory to produce this gun is one of the largest of its kind. Practically all the employees have been absorbed from other industries and had no previous experience of gun production.

THESE AUSTRALIANS are kneeling in front of the ammunition limber of a 25-pdr. gun. The big spots on the limber door are cushions to prevent the shells from jumping about

On left—**AN ANZAC,** brushing up his gunnery in England, is here making use of the sight slometer and dial sight of a 25-pdr. field gun, preparatory to "laying" the gun. This is one of our latest technical improvements

Above—**THE BRITISH ARMY'S 25-POUNDER** has been described as the best field gun in the world. It is completely modern and has only been in use for a short time, but did fine work in France, where it was equally effective as artillery and as an anti-tank weapon. It is actually a "gun-how"; that is, it can be used with varying charges to give howitzer effect, as well as with ordinary ammunition. The range is approximately between 11,000 and 12,000 yards. It is far better than the old "25-18." Used with the portable wheel-base shown in the picture (this is carried on the trailer), it can be traversed very quickly to engage moving targets such as tanks. A detachment of about ten men is needed for the operation of this gun, including those on the ammunition limber. The oversize tyres are constructed specially to resist small-arms fire when in close action

THE SHELLING AT ITS HEIGHT: HUGE WATERSPOUTS GO UP AS THE SHELLS BURST IN THE SEA. THIS PICTURE WAS TAKEN BEFORE THE SMOKE SCREEN WAS PUT DOWN IN FRONT OF THIS LITTLE GROUP OF CARGO VESSELS

At 9.30 on the morning of the 22nd as a British convoy was proceeding through the Straits of Dover four enormous spouts of water shot up into the air around one of the convoying warships. Nearly two hours later a most incredible and continuous shelling of the convoy began—by German land guns mounted on the cliffs of the French coast. Guns all along the French coast from Calais to Boulogne appeared to be taking part, firing in batteries of four and at the rate of about ten shells per minute. The flashes could be seen distinctly, and as one man put it, "we could have run round the ship before the shell was on us, to burst in the sea." During the shelling, a single enemy plane, high up, spotted for the batteries but it was quickly chased away by the British fighters protecting the convoy. As soon as the guns opened fire, British warships raced down the line of ships laying a smoke screen. When the smoke of battle had died down, despite that from 150 to 200 shells had been fired from France, it was seen that the convoy was intact. Not a hit had been registered

SALVOS BURSTING IN FRONT OF THE CONVOY: IN THE DISTANCE THE COAST OF FRANCE:

It is estimated that the shells must have been travelling at 1,000 m.p.h. on their passage from France to their targets over 20 miles away. The roar as they exploded was shattering. Despite that the day was perfect, however, with spendid visibility and conditions ideal for the gunners, not a shell found its target amongst the long line of ships. The spout of water thrown up as each shell struck towered well above the masts of the ships in the convoy, and fragments of shrapnel rained down on all sides. The thunder of the guns could easily be heard on the English side of the Channel, and some of the coast towns shook with the concussion

THE CONVOY EMERGES UNSCATHED AFTER VESSELS STILL PLOD ON TO THEIR HOME IN THE BACKGROUND CONTINUES TO LAY

The GERMANS SHELL A BRITISH CONVOY

Wonderful Pictures of the Channel Bombardment by Enemy Guns on the French Coast

AS SOON AS THE ATTACK OPENED, BRITISH DESTROYERS LAID A PROTECTING SMOKE SCREEN ROUND THE CONVOY

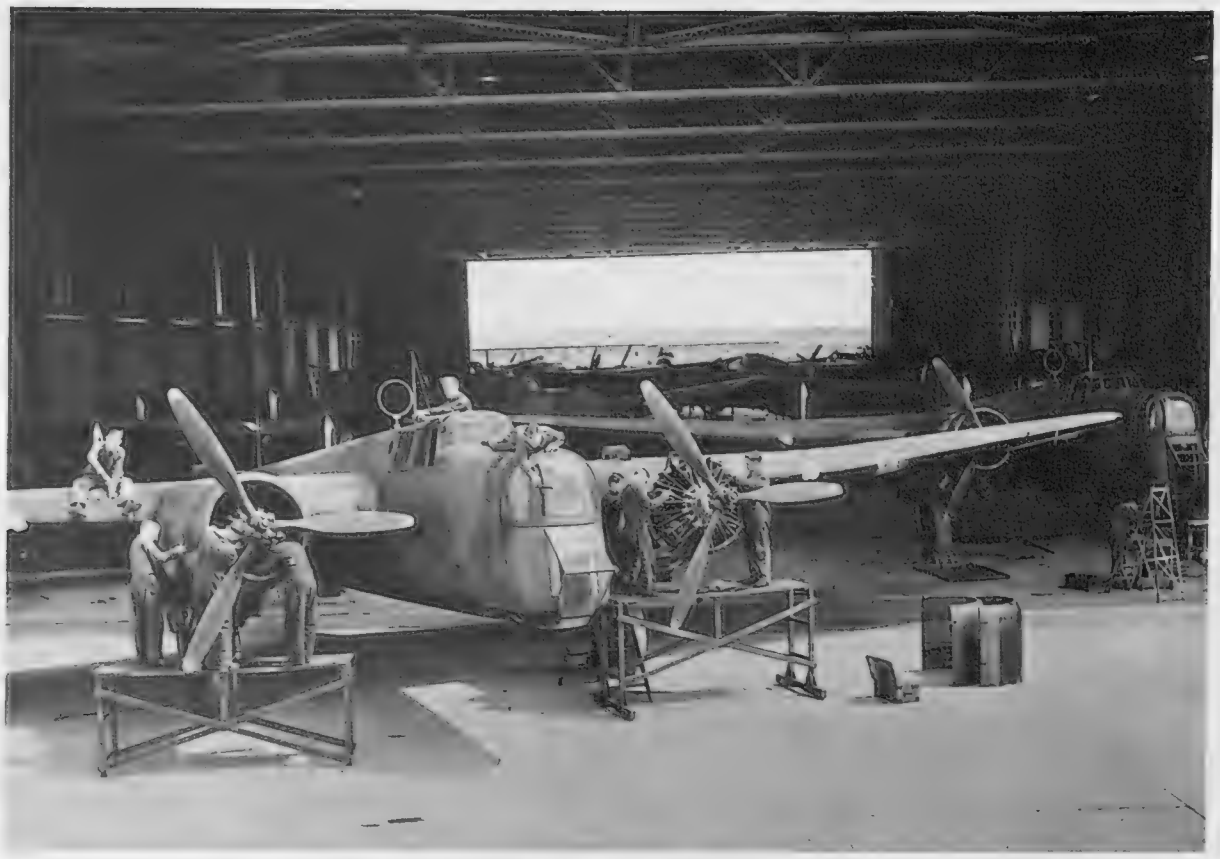
When the first shells fell, the escorting destroyers flashed into action, racing up and down the line of ships and throwing out a dense screen: they dropped smoke floats on the water and the convoy scattered. As the bombardment continued, the aim of the gunners became noticeably worse, but on some of the ships "the bridge was awash with about a foot of water, from the spouts," as one captain described it

A PICTURE TAKEN AT THE HEIGHT OF THE ATTACK—A SHELL FALLS HARMLESSLY, BUT NEVERTHELESS DANGEROUSLY NEAR, INTO THE SEA BETWEEN TWO OF THE CONVOY'S SHIPS

BEFORE THE SMOKE SCREEN WAS LAID DOWN: THE FIRST SHELLS BURSTING BEHIND THE BRITISH VESSELS AND THROWING UP HUGE GREY PLUMES OF WATER. LATER THE VESSELS BROKE FORMATION UNDER INSTRUCTIONS FROM THEIR NAVAL ESCORT AND ZIG-ZAGGED AWAY CLOSER INSHORE

THE ATTACK: THE CARGO PORTS, WHILST THE DESTROYER ITS PROTECTING SMOKE SCREEN

The vessels in the convoy were all small ships: although there were many near misses none of the ships was sunk, thanks largely to the smoke screen laid down by the protecting warships and to the orders issued by the naval commander to his charges. Battery after battery of enemy guns followed the vessels' course until at last they passed out of range. And Germany's heaviest attack on a British convoy had passed—and failed



KEEPING THE HEAVY BOMBERS IN FIGHTING CONDITION

Amongst the heavies of the Bomber Command the big Whitleys occupy a very high position. This picture shows how these fine aircraft are maintained at their high pitch of perfection by the ground staff charged with their daily upkeep. The particular squadron to which these machines belong operates nightly in the bombing attacks on military objectives in Germany, when aircraft factories, aerodromes, armament works, marshalling yards, fuel storage tanks, all receive proper attention. It is not generally realised how much the squadrons rely on their ground staffs; without their devoted help the number of aeroplanes ready and fit for these nightly operations would be greatly curtailed. The Whitleys of the Bomber Command have a very big range. And they can carry a very heavy load of bombs at well over 200 m.p.h. (This picture, incidentally, is one of many showing R.A.F. war activities now on view at the R.A.F. Exhibition at 158, New Bond Street in London)

AIR COMMENTARY
BY C. G. GREY
(Founder of *The Aeroplane*)

A LESSON to LEARN

Reflections on the Tragic Australian Flying Disaster; and on the Deliberate Misuses of the Country's Willing Man-power

There are certain aeroplanes which cannot be landed slowly unless the engines are kept running. And if one engine should happen to stop at that critical moment the aeroplane is liable to roll over on to one wing-tip and dive into the ground, exactly as accounts which have reached this country describe that aeroplane as doing. Any aeroplane ought to be able to land slowly without any engines running.

Think, if we could capitalise the value of those men to the Empire, how far all that money would go towards producing safe aeroplanes. For twenty years past and more, particularly during the past twenty months, all countries have spent millions of pounds, dollars, and marks, and perhaps not so many millions of francs and lire, on building war machines. There seems to be a belief that the work of a war machine is so dangerous anyhow that nobody need worry if the aeroplane itself is inherently dangerous. But that is no excuse for going on building civil aeroplanes which are equally dangerous and depend for the comparative safety of Air Line passengers on the personal skill of the pilot.

The Americans pride themselves on not having had an important aeroplane crash in millions and millions of miles of Air Line flying during twelve months recently past. But here we have this fatal crash in Australia in an American Air Line machine of a type which must have covered some millions of those faultless miles.

A writer in *The Times* recently asserted, or assumed, that "no day or hour passes without constant thought, experiment and practical observation by our aeronautical experts." That may be true enough. But unfortunately in the pressure of turning out standardised war machines there is not much material or labour or workshop space to spare for experiment and practical observation.

Mr. Winston Churchill, on May 29, 1936, said: "The use of recriminating about the past is to enforce effective action at the present." If space were available,

AUSTRALIA'S loss in that aeroplane crash which killed so many of the best men in the Australian Government can never be made good. I knew J. V. Fairbairn, the Air Minister. He was an exceptional personality among politicians. He gave one an impression of absolute honesty, and he was so rich that he had no need to be in politics at all. As a pilot in the last war he had a high reputation and he was still a first-class pilot. He flew his own machine out from England in 1938, and he had flown a new Percival Q 6 round Australia only a few weeks ago.

His knowledge of flying makes all the more extraordinary his agreeing to travel in an aeroplane with so many other people of importance to the Australian nation. No experienced pilot ever believes in putting too many eggs in one basket. But I am afraid that like a good many other old pilots he had been convinced by commercial propaganda that modern aeroplanes are safer than the aeroplanes which he flew in the last war. As a matter of fact they are not. They may be better built of better material, and the motors are more reliable, and the average aeroplane to-day is easier to fly than was the average of twenty years ago. But aerodynamically, that is to say, from the point of view of the science of aviation, they are no safer.

They are just as liable to stall and spin into the ground now as they were twenty years ago. And there is no reason why they should do so except for the inborn obstinacy of aeroplane designers all over the world. The first designer who makes a safe aeroplane will have a bigger job to convince other aircraft people that he is right than Jenner had when he advocated inoculation against smallpox.

I hope that the Australian Government, which has a habit of doing things which are unpleasant to aeroplane interests, will insist on holding an inquiry into the reason for that crash, and will publish the results.

WHAT A RAID BY THE R.A.F. LOOKS LIKE FROM A DISTANCE OF OVER 20 MILES ACROSS THE ENGLISH CHANNEL

This striking picture was taken from the south-east coast of England a few nights ago as bombers of the R.A.F. launched a terrific attack on the German-occupied French coast between Calais and Boulogne. Reports issued by the Air Ministry frequently make such remarks as: "Blenheim aircraft of the Coastal Command caused many fires when they raided the aerodrome at St. Omer in Northern France. There was a big explosion on the ground followed by several smaller ones. Fierce fires broke out . . . ," or "A Blenheim was approaching Cap Griz Nez on the return journey when a concentration of German searchlights opened up on him. He dived and dropped all his bombs on them. The lights went out and fires started on the headland." Or, again, "A fire started at St. Inglevert Aerodrome could be seen from the other side of the English Channel. . . ." In the picture above are seen (on the left) streams of the "flaming onions," about which there has been so much comment recently; these are seen shooting into the sky from the anti-aircraft guns, whilst other shells are seen bursting elsewhere. Under the "flaming onions" (or tracer shells, fired from pom-poms) is seen the glow of a fire started by bombs; the lights dotted along the coast are also believed by the photographer to be fires caused by our aircraft

RAIDERS OVER ENGLAND—AN ACTUAL PICTURE OF FLIGHTS OF GERMAN BOMBERS ON THEIR WAY TO ATTACK

Now that we have experienced aerial mass attacks on this country, we have been able to observe some of the tactics by which the enemy has attempted to pierce the defences of this country. Some of these tactics have already been illustrated and described at length in this journal. Here is an opportunity to see what a comparatively small force of the air invaders looks like actually in the air. In this case, the aircraft were all bombers: in all probability their fighter escorts were too high up to be visible, or lying too far behind the main body to be included by the photographer. From a close study of the picture it would appear that some of the aeroplanes were flying at a different level from the leaders. The grouping appears to be in flights of varying numbers, and towards the rear it looks as if the formation had become disturbed, or possibly already broken up by British fighters. In all there are twenty-six bombers visible in this picture, and they are flying in the "Vic," or spearhead, formation which has become the recognised method for warcraft over hostile territory. It is difficult to get such pictures as the above owing to the height at which enemy aircraft usually fly

I could write volumes of corrosive recrimination about the good ideas which have been turned down in the past twenty years by our Government experts. In fact, one might say that the value of a good idea or a new design may be measured by the amount of fighting which has been done to get the official experts to allow the practical flying people to give it a fair trial.

The folly and blindness of those in high places (leaving out of the argument Marshal of the Royal Air Force Viscount Trenchard, who knows more about air war than anybody else does) has cost thousands of lives in the short history of aviation, just as the folly and blindness of those in high places in other activities of the nations of the world have cost millions of lives in useless wars which might have been avoided if honest men had been at the top.

In the meantime, we have to win this war, and we want aeroplanes. We happen to know that our aeroplanes are better than those of the enemy, which is a vast consolation. But that is no reason for holding up the development of newer and better types so that there may be more money, material and man-power spent on quantity-production.

We have new types coming along which are far better than anything in use to-day. But if there had been more intelligence on the production side for the past year or two, we should have had several of those new types in service to-day instead of being about to go into service. And the enemy's losses during the past few weeks would have been still heavier.

A loss of 500 machines in a week or so, which probably means a loss of 1,000 or 1,500 men, sounds enormous, but that is only because we are not accustomed to air war. People who are old enough to remember the Battle of the Somme in 1916 will remember that we lost, unless my memory is faulty, more than 200,000 men in a week.

Just in case anybody may say that they were only common soldiers and not the "heroic birdmen" of to-day, we may do well to remember that a man does not immediately become a saint and a hero by getting into uniform, either of an infantryman or of an airman. And nobody will be quicker to say so than the R.A.F. people themselves.

The mad thing about all this killing is that we are not using our man-power and woman-power as we might. We cannot even kill efficiently. If one of those Americans who is convinced that England is already overcome and on the verge of collapse happened to come over here and fall into my hands, I should take great pleasure in conducting him round and showing him the astonishing reserves of man-power and woman-power which we have unused in this country. There is nothing like the personal argument to convince people, so let me quote some examples, from my limited personal knowledge, of people who are looking for a chance of helping to win the war, and are not allowed to do so.

First, there is a friend of mine in the City who has to do with finance. He is not a company promoter, but just a successful business man. In the last war, he was lent by his firm to one of the major Government departments to keep an eye on a certain section of its finance. And later, he was lent by that department to the Air Ministry for the same purpose. I imagine that there is a good deal of Air Ministry finance which needs looking into in this war.

Secondly, there is an engineer, a trifle over or under sixty years of age, who in the last war organised the repair and rebuilding of aero motors. He worked up the biggest output in the country, and was personally congratulated by King George V on his achievement.

Thirdly, at any rate a few days ago, there is a first-class workshop organiser, a specialist on machine tools, quite a young man who did an excellent job of work boosting the output of an aircraft company. He left over a matter of personal disagreement. To my knowledge he has been idle for nearly two months, and has always been hunting for a job.

Fourthly, an engineer, about thirty-six years of age, who took a good Engineering Degree at Cambridge, and is a specialist in the production of aluminium.

Fifthly, a bunch of four or five flying instructors and navigation instructors who are doing odd jobs in or out of the Air Force but are not instructing.

Sixthly, half a dozen or so men who were in the R.A.F. in the last war, who are desperately keen on helping in this war, who are capable of giving elementary instruction in aerodynamics or the mechanism of aeroplanes and motors up to the standard of the Initial Training Wings, or to Air Defence Cadet Squadrons (so long as they are allowed to exist).

Seventhly, there are about twenty-five to thirty intelligent young women in the small district where I live looking for jobs as shorthand-typists. I put an advertisement in our local paper and on the day the paper was published I had ten telephone calls between nine and ten o'clock in the morning, and in three days I had fully fifty, of whom half were obviously intelligent. I interviewed a dozen or so who were educated, presentable young women, some of them exceptionally well educated. And yet they cannot get work.

There is also the case—known to me—of a particularly brilliant young officer who resigned from the Air Force to go into the Oil business, rose astonishingly quickly to high responsibilities, and then left that business to become Managing Director of an important Commercial Firm in the North. He is little more than forty, but can find no war work to do.

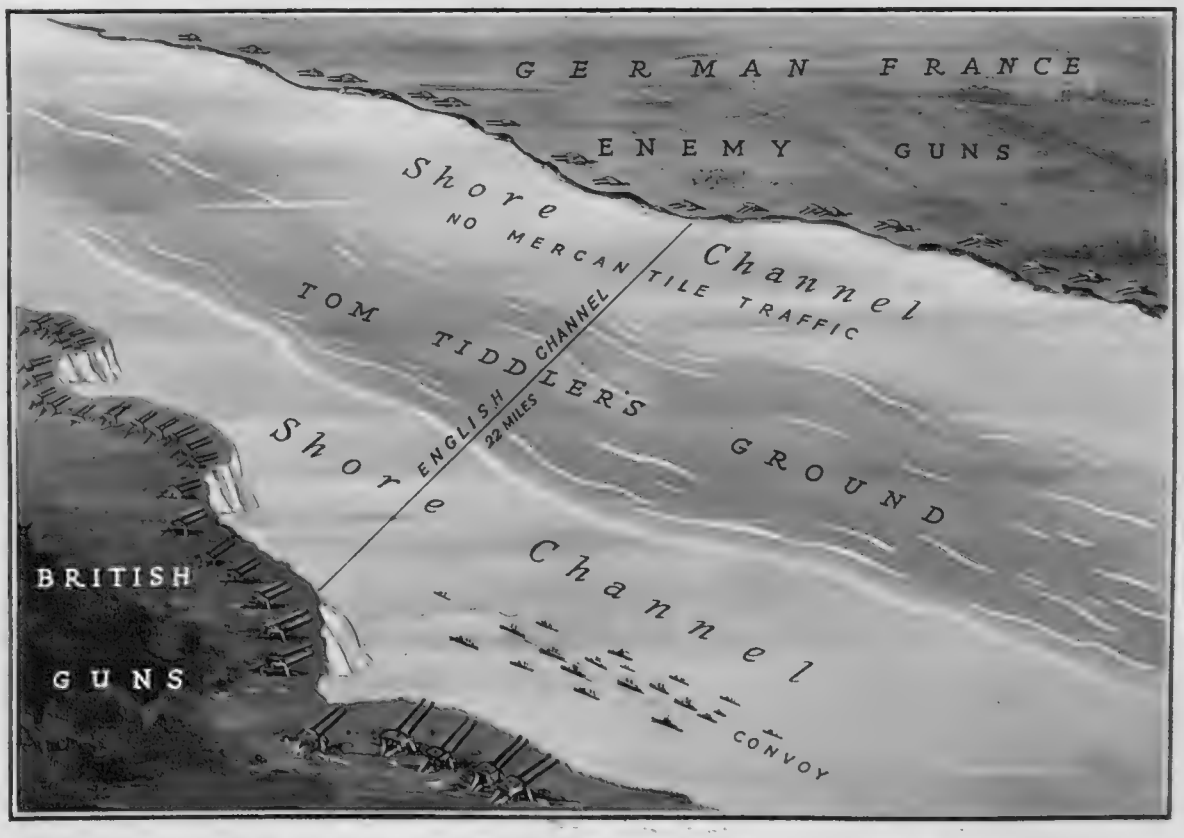
All those people want to help to win the war, and are not allowed to do so. Ask yourself, good reader, how many cases of that sort you know yourself.

And yet we have a Ministry of Information and a Ministry of Labour and all sorts of Ministries, which fail to find the right people for jobs, or fail to tell people where to find the right jobs. And yet anybody who knows any of those Ministries, knows that if the majority of their staffs had a little more sense they might with luck be half-witted.

And when one looks inside the Services themselves one finds first-class men working on trivial jobs, and half-wits trying to do the important jobs.

When one sees all the untouched reserves of intelligence, one is bound to believe that we must win the war for some day somebody in power will discover and use them. Somewhere about the end of 1917, an American friend of mine said, "You Britishers are bound to win this war. For three years the Germans have been doing their best to win it, and they can't. For three years, you've been doing your best to lose it, and you can't. So you've got to win it." One can say much the same thing after one year of this war.

In the meantime, the R.A.F. is not doing too badly. There are lots of intelligent people inside the Air Force who are coming up to the top. Gradually, people in the Trade are being allowed by the Air Ministry and the politicians to do more intelligent things. So, altogether, things look very hopeful for the second year of the war.



"TOM TIDDLER'S GROUND" IN THE ENGLISH CHANNEL

In such phrase airmen and wireless commentators refer to the middle courses of the Dover Straits. On each side the waters are commanded by the shore guns of either British or Germans: obviously our convoys keep to the English side of the Channel when coming up to port, as then they are protected from enemy land guns, "E" boats and (to a very large extent) aircraft. The Germans, of course, have no convoys to protect—or, for that matter, any mercantile marine. The stretch of water in the centre of the Channel is thus "Tom Tiddler's Ground" or "No Man's Channel." It is across this area that the Germans have been hurling their shells during their bombardment of Dover

WHAT OF THE ITALIAN NAVY?

Its "Escape" Tactics and Long Range Gunnery Examined; together with Some Comparisons of Types

"Our Very Great Preponderance of Sea Power Enables Us to Turn Our Eyes and Our Strength Increasingly Towards the Mediterranean . . ." The Prime Minister, August 20

By FRANK BOWEN

WHILE the Navy is kept as busy as ever in the North Sea ready for any invasion plans but in the meantime taking its full share in the work of checking German air attacks on convoys, a good deal of the interest of the war at sea has been transferred to the Mediterranean where the strength of the Italian Navy as compared with that section of the British which can be spared for Mediterranean work, and the Italians' boasted intention of making the Mediterranean Sea an Italian lake, promises more open warfare and more exciting incident. It is true that up to now the "escape" tactics of the Italians have been a big disappointment to the British Navy, but there is still the chance of important actions and two entirely different schools of naval architecture are in contact.

	King George V Class	*Littorio* Class
Displacement	35,000	35,000
S.H.P.	152,000	130,000
Speed	Over 30 knots	30 knots
Armour Belt (max.)	16 ins.	12 ins.
Armament	10—14-in.	9—15-in.
	16—5·2-in.	12—6-in.
	Many small	52 small
Broadside (main armt.)	15,600 lb.	17,100 lb.*
Ahead (main armt.)	9,360 lb.	11,400 lb.*
Astern (main armt.)	6,240 lb.	5,700 lb.*

* Approximately

It is striking that the Italians have been forced to go back to the capital ship, both of new design and old ships modernised, but the traditions of the *jeune ecole*, to which they were whole-hearted adherents after the late war, are still deeply ingrained in Italian policy and thought, and this is shown in the design of their warships which make a very interesting contrast to their "opposite numbers" in the British fleet.

Comparison must be made, of course, with the reservation that it is only occasionally that the Admiralty releases the names of British ships employed in the Mediterranean so that it is only possible to take the approximately parallel types although they may never meet. It is also difficult to compare the 35,000-ton British King George V type with the Italian Littorio type of the same displacement on account of the very limited information that has been published, most of it unofficial, so that the first table is largely conjectural.

	Warspite Class	*Andrea Doria* Class
Displacement	30,600	23,622
S.H.P.	80,000	75,000
Speed	24 knots	27 knots
Armour Belt (max.)	13 ins.	9¾ ins.
Armament	8—15-in.	10—12·6-in
	8—6-in.	12—5·3-in.
	8—4-in. A.A.	10—3·5-in. A.A.
	19 small	39 small
Broadside (main armt.)	15,360 lb.	Weight of new shell not published
Ahead (main armt.)	7,680 lb.	
Astern (main armt.)	7,680 lb.	

In many respects there is reason to believe that the remarkable features which are reported to have been introduced into the King George V class have made the Italians' obsolete before they were completed, for they were laid down in 1934 and completed about the same time as the British ships laid down nearly three years later. The Italians' apparent superiority in weight of fire is interesting, as the King George V class reverted to the 14-in. gun with its smaller shell in order to get one more gun into the salvo. The secondary battery is mounted in four triple turrets in the Italian ships, an awkward system when very rapid fire has to be maintained, and eight double turrets in the British.

	Dorsetshire	*Bolzano*
Displacement	9,975	10,000
S.H.P.	80,000	150,000
Speed	32¼ knots	36 knots
Armour Belt (max.)	All internal	2¾ ins.
Armament	8—8-in.	8—8-in.
	8—4-in A.A.	12—3·9-in. A.A.
	20 small	18 small
	8 Torp. Tubes	8 Torp. Tubes
Broadside (main armt.)	2,048 lb.	2,080 lb.
Ahead (main armt.)	1,024 lb.	1,040 lb.
Astern (main armt.)	1,024 lb.	1,040 lb.
Oil Fuel	3,200 tons	3,000 tons
Crew	650	725

In the modernised battleships designed before the late war the comparison can be made on more certain grounds, for it has been announced that at least one unit of the Warspite class has been in action and the reconstructed ships of the Andrea Doria type are her contemporaries, dating from 1913, although the reconstruction of the Italian ships, including the task of increasing their speed from 23 knots to 27, was much more complete in the case of the British.

In cruiser design the comparison is more complicated, for there are so many things to be considered in the design of a British cruiser intended to keep the seas for indefinite periods in all parts of the world, and an Italian ship designed for "tip and run" raids in the

The damage shown here on one of the Italian warships after the action with a British cruiser and destroyers seems to have been caused by splinters. Turrets and anti-aircraft guns seem to have been crushed up together as the result of the shelling

Mediterranean. These factors are shown by comparing the *Bolzano*, the newest Italian "Washington" cruiser, with H.M.S. *Dorsetshire*, the newest British

The Italian battleship Conte di Cavour *is here seen from over the gun turrets of* Guilio Cesaré, *off Naples. From this angle the* Conte di Cavour *has the appearance of a heavily armed monitor*

Taken when the Italian vessel was retiring to shelter, for her guns are bearing abaft the beam

ship of that type, which is about three and a half years older, as the British were the first to abandon the "Washington" tinclads.

Once again the figures are rather misleading, for it appears that the Italian ship obtained 3¾ knots more speed without any great sacrifice of armament or fuel. The *Dorsetshire*, moreover, has a good deal of protection although it does not appear in the ordinary direction of thickness of belt, and the Italian, which naturally consumes far more fuel with her bigger horse power, cannot approach her designed speed when her oil tanks are full, whereas the British ship can exceed it.

It is in the famous Condottieri class of 6-in. gun cruiser that Italy takes the greatest pride, but as it is designed for a purpose unknown in the Royal Navy, and one which failed signally when the *Bartolomeo Colleoni* came into contact with H.M.A.S. *Sydney*, it is difficult to find an exact comparison, for the British ship of the same size has lighter armament in order to allow for qualities which we consider necessary and a ship of the same armament has considerably more displacement. The figures side by side, however, show the differences in ideas very strikingly.

	Arethusa Class	*Sydney* Class	*Bartolomeo Colleoni* Class
Displacement	5,220	6,830	5,069
S.H.P.	64,000	72,000	95,000
Speed	32½ knots	32½ knots	37 knots
Armour Belt	2 ins.	3 ins.	Nil
Armament	6—6-in.	8—6-in.	8—6-in.
	8—4-in. A.A.	8—4-in. A.A.	6—3·9-in. A.A.
	9 small	14 small	18 small
	6 Torp. Tubes	8 Torp. Tubes	4 Torp. Tubes
Broadside (main armt.)	600 lb.	800 lb.	824 lb.
Ahead (main armt.)	400 lb.	400 lb.	412 lb.
Astern (main armt.)	200 lb.	400 lb.	412 lb.
Oil Fuel	1,200 tons	1,725 tons	1,000 tons
Crew	450	550	500

In addition to their gun and torpedo armament the Italian ships carry a number of mines, partly for laying on hostile coasts but more for dropping in the path of pursuing warships when they are carrying out their usual "escape" tactics. The wisdom of carrying such dangerous things in a vessel designed for fighting is open to a great deal of question, but if her set purpose is to avoid action wherever possible it is, of course, another matter until it proves that the action cannot be avoided.

The *Bartolomeo Colleoni* and her sisters started the Condottieri type in 1930, but since then it has developed steadily to the *Giuseppe Garibaldi* and her sister of 1936, and comparing her with the *Ajax* of River Plate fame, built in 1934, the same tendencies are to be observed.

	Ajax	*Garibaldi*
Displacement	7,030	7,874
S.H.P.	72,000	100,000
Speed	32½ knots	35 knots
Armour Belt	4 ins.	3 ins.
Armament	8—6-in.	10—6-in.
	8—4-in. A.A.	8—3·9-in. A.A.
	14 small	16 small
	8 Torp. Tubes	6 Torp. Tubes
Broadside (main armt.)	800 lb.	1,030 lb.
Ahead (main armt.)	400 lb.	515 lb.
Astern (main armt.)	400 lb.	515 lb.
Oil Fuel	1,800 tons	1,200 tons
Crew	550	500

Considering what H.M.S. *Ajax* did to the German battleship *Admiral Graf Spee* at the River Plate, the Italian *Garibaldi* is not likely to stand a very good chance against her, in spite of her larger displacement and heavier broadside, while the scantlings of the Italian ships are very much lighter.

Although the Italians were the first to take up the super destroyer type, generally described as a flotilla leader although it is not intended to lead flotillas, the average displacement of their numerous destroyer fleet is moderate. A comparison between the British Javelin class and the Italian *Oriani* and her sisters is interesting.

	Javelin Class	*Oriani* Class
Displacement	1,600	1,729
S.H.P.	40,000	48,000
Speed	36 knots	39 knots
Armament	6—4·7-in.	4—4·7-in.
	6 small	12 small
	10 Torp. Tubes	6 Torp. Tubes
Oil Fuel	*See below*	250 tons
Crew	183	157

Although the oil fuel capacity of the British Javelin class has not been published, the "H" class of only 1,340 tons displacement carries 455 tons, so that the new ships certainly carry infinitely more than the Italians and it would seem to be that their extra three knots in speed has been bought at a very heavy price in gun and torpedo power, radius of action and other features.

The big Italian submarine fleet is so varied in design, and differs so radically from the British, that it is difficult to find a really useful basis of comparison of approximately even date. Generally speaking, the Italian submarines carry a bigger gun and smaller torpedo armament than the British, average a higher speed on the surface but less submerged, and are specially designed for crash diving to great depths where it is hoped that they are out of reach of depth-charges. Their submarine fleet suffers badly from multiplicity of design and lack of any fixed principles.

A ROUND-UP DURING AN EXERCISE IN WHICH A FARMER'S BOY TAKES THE ROLE OF A PARACHUTIST HIDDEN IN THE BRACKEN ON THE MOOR, HIS "PARACHUTE" BESIDE HIM

THE WATCH ON EXMOOR

The First Official "Cavalry Troop" of the Home Guard

LORD FORTESCUE, LORD LIEUTENANT OF DEVON, INSPECTS SOME OF THE "CAVALRY TROOP" OF THE EXMOOR HOME GUARD, DRAWN UP IN THE STREET OF AN EXMOOR VILLAGE

CAPTAIN SAYER (on left) LEADING HIS MEN OVER A TYPICAL LITTLE DEVON BRIDGE ON THEIR WAY TO THE MOORS

The wild stretches of Exmoor are now being patrolled by day and night by the Exmoor Mounted Patrol under the command of Captain H. Sayer, D.S.O., M.C. Members of the Patrol are all enrolled as Home Guards; they are mainly farmers of the Dulverton Hunt who have ridden after the fox across these miles of rugged moorland. They know this Lorna Doone country intimately; mounted on their own hardy ponies and armed with service rifles, they form a giant ring round Exmoor as a guard against the descent of German parachute troops. This constant watch is maintained by the patrols working in relays between harvesting periods. Similar work is being carried out on Dartmoor, on the Yorkshire Moors, and on other lonely stretches of countryside in Britain.

TWO FARMERS, ACTING AS SCOUTS, SCAN THE DIFFICULT AND BROKEN COUNTRYSIDE FROM A POINT OF VANTAGE. THEIR HORSES ARE CONCEALED IN A CULVERT

TWO MEMBERS OF THE MOUNTED PATROL CROSSING ONE OF THE ROUGH, SHALLOW RIVERS OF EXMOOR DURING THEIR TOUR OF DUTY

THE COMMANDER OF A NAVAL ESCORT VESSEL WATCHES THE ENEMY BOMBERS, WHO CAME OVER AFTER THE LAND BOMBARDMENT

ON BOARD THE ESCORT VESSEL: THE COMMANDER ON THE BRIDGE DURING THE AIR ATTACK. NOTE THE MACHINE-GUNNER IN HIS ARMOURED POSITION ON THE BRIDGE

ON BOARD ONE OF THE VESSELS IN THE CONVOY: THE SHIP'S GUNNER IN HIS SANDBAGGED POST AND (on right) A NEWSPAPER REPORTER; BOTH ARE WATCHING THE DEVELOPMENT OF THE AERIAL ATTACK WHICH CAME AFTER THE BOMBARDMENT

SIGNALMAN K. STONE, WHO WAS BUSY TRANSMITTING ORDERS BY ALDIS LAMP ALL THROUGH THE BOMBARDMENT

AFTER THE DOUBLE ATTACK BY LAND GUNS AND AIRCRAFT: THE WARDROOM RELAXES AFTER A VERY HECTIC VOYAGE ON CHANNEL ESCORT DUTY

ONE OF THE KITES FLOWN FROM THE CONVOY AS A PROTECTION AGAINST DIVE-BOMBING ATTACKS BY THE GERMANS

On BOARD the CONVOY

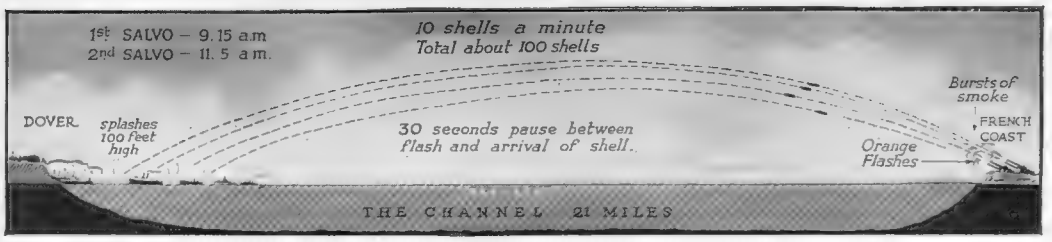
On preceding pages we give a series of striking pictures taken during the bombardment of a British convoy by German guns on the French Coast. Here we publish a series of pictures taken during this same bombardment, but this time actually on board one of the vessels

MR. E. ROSS-WHITE, WHO TOOK THESE DRAMATIC PICTURES, CAUGHT IN THE ACT WHILST SECURING HIS PHOTOGRAPHS

AFTER THE BOMBARDMENT—THE SMILES OF THE CREW MAY BE EXPRESSIVE OF THEIR OPINION OF GERMAN MARKSMANSHIP

AND THEN CAME THE RUM RATION. THE MEN ARE WEARING THEIR NEW-PATTERN LIFEBELTS AND (OF COURSE) TIN HATS

SAFE BACK IN PORT—THE CREW OF ONE OF THE SHIPS IN THE CONVOY AFTER THEIR SAFE ARRIVAL HOME



HOW THE BOMBARDMENT BY LAND GUNS WAS CARRIED OUT: TEN SHELLS A MINUTE FROM THE FRENCH COAST, AND A 30 SECS. PAUSE BETWEEN FIRING OF THE GUN AND THE SHELL'S ARRIVAL NEAR THE CONVOY

THE BURSTS FROM THE EXPLODING SHELLS COME CLOSE TO THE CONVOY—BUT NOT CLOSE ENOUGH: A PICTURE TAKEN DURING THE LAND BOMBARDMENT FROM THE FRENCH COAST

THE SMALL SHIPS OF THE CONVOY—WITH LIFEBOATS SWUNG OUT FOR EVENTUALITIES—COME PLACIDLY HOME TO PORT AFTER HAVING SUSTAINED ATTACK FROM BOMBARDMENT AND FROM BOMBING

THE NEW SUGAR SUBSIDY AGREEMENT: Last year the British Sugar Corporation was able to produce 500,000 tons of sugar from beets grown from the soil of Great Britain. This is more than sufficient to meet the present ration for the civil population for one year. This was stated by Lieut.-Colonel Sir Francis Humphrys at the annual meeting of the Corporation. He also stated that during the war period the direct sugar subsidy (which last year amounted to £2,655,000) is to be substituted by a "deficiency payment" and a revised "incentive to efficiency" agreement. In the latter the Exchequer and the Corporation will share the economies. This picture shows one of the Corporation's factories, with "flumes" piled with beets ready for treatment

OFFICERS TAKE UP GROUSE SHOOTING ON THE MOORS: Officers stationed in Catterick, Yorkshire, have started their own shooting club, membership of which costs £5. Most of the members go shooting in mufti for a few hours at the week-end on the East Yorkshire moors

TRAINERS IN EXILE: A group of racehorse trainers, who trained for famous owners in Paris and elsewhere for many years, are now in London; here they are seen lunching at the Overseas Club. From left to right are J. G. Kerr (from Brussels), George Batchelor (from Chantilly), who trained for Mr. James Hennessey for thirty-five years, Mr. W. Granard and Mr. Jack Wilson (of the Victoria Club), and Richard Grant, a trainer at Laffitte

NEW GUNS FOR OLD—THE TOWER GUNS GO FOR SCRAP: The British and French guns outside the Tower of London, all of which are over 100 years old, are to be broken up for scrap. Eight guns inside the Tower, weighing 25 tons, have also been lifted and will soon be removed by the scrap merchants. The guns will produce in all 150 tons of metal

The World of Books—By Vernon Fane

FICTION or TRAVEL

Both Tastes are Catered for in This Week's New Books

THE name of C. S. Forester on a new book provokes the question, Is it another Hornblower? If, after discovering that it is not, the second question arises—Is it as good as a Hornblower?—Mr. Forester has only himself to blame for creating a classic.

THE EARTHLY PARADISE (Joseph. 8s.) is a tale of the Spanish Main, with a pot-bellied Spanish lawyer for a hero, an ageing Christopher Columbus for the second lead, the voyage of 1497 for time and action, and a chorus of cut-throat hidalgos to colour the discovery of Trinidad and the mouth of the Orinoco.

Here is a story fit for heroes to swash-buckle in; pearls; gold; a Caribbean storm; a Robinson Crusoe episode; a fight with an alligator; an expedition into the green hell of an Orinoco jungle; the hideous burnings, followed by the massacre, on Espanola; the horrible mixture of superstition, greed, cruelty, jealousy, ambition and ignorance.

Superficially there is nothing heroic about Don Narciso. Physically he quails before the tough, hot-tempered hidalgos. Unused to violence, he has grown plump and soft in the years of his profession of the law. With Columbus he is at an equal disadvantage, for that high-handed and magnificent seaman knew what he was about. That his wonderful feats of navigation were circumscribed by a deep-rooted superstition and religious fanaticism made him all the more certain that his guidance was divine.

Don Narciso's lawyer-trained mind dimly yet fearfully apprehends scientific discoveries as yet unmade, rejects the theories Columbus builds round his discoveries, senses something tremendously beyond the fixed ideas of Cathay and the Indies, and instinctively revolts against the Spanish treatment of the natives. But these are the grim days of the all-powerful Inquisition and no time to flicker an eyelid of revolt against medievalism.

So Don Narciso had to school himself to become brave and tough; to fight and to command. He also had to wage a subtle battle with the equally tough convictions of the fanatical Columbus; and to learn to keep his comprehendings to himself.

Mr. Forester has obviously enjoyed building his hero out of such unheroic material and giving his tale of non-stop adventure an ironic twist. His game is with historical forces in which his characters are set pieces: his swift moving action but the dexterous accompaniment to the deeper level of his story. Is it as good as Hornblower? Well, it is different: and Mr. Forester doesn't know how not to be good.

Mr. Upton Sinclair is a novelist of no ordinary calibre. He is a big game fisherman in the sea of literature; he is out to land an epic.

WORLD'S END (Werner Laurie. 10s. 6d.) bears all the outward and visible signs of being one. It carries a twelve-page inset on the history, design and purpose of the book, by the author, which also carries the announcement that the Literary Guild of America have ordered 50,000 copies of this "stupendous epic," and it is supported by a statement by Mr. Louis Bromfield that the book is "of passionate interest to all the world at this moment."

After that broadside all that remains to the reader is to look for the inward and spiritual grace. Blessed are the young Americans born at the beginning of the century, for they shall inherit all the qualities which enable their novelist creators to belabour the path of history with every kind of what-might-have-been and to adorn the tale with an impressive row of famous scalps.

Lanny Budd, scion of an American armament-maker's family, was suitably born in Europe and bred in the hothouse atmosphere of the French Riviera. He attended the outbreak of the last Peace as a secretary to a member of the delegation. He saw it all from the inside. He took the roaring twenties and the dismal thirties in his stride.

Though his cosmopolitan equilibrium was never undisturbed, he remained a true American. His career follows the pattern of a tragic period in the world's history, in which social disturbances, the march of the careers of men famous in politics and the arts, and the whole international hubble-bubble are examined in vivid detail. It is all fiercely limelit with the author's trenchant personality. It is a relentless pursuit of all opponents of the author's political theories. It distorts by over-emphasis, bludgeons with invective and essays to shock by arbitrary contrast. It clings like a limpet to the naive American conception of democracy. Stupendous it might be: an epic it is not.

TOO DEAR FOR MY POSSESSING (Collins. 8s. 6d.), by Pamela Hansford Johnson, is a quiet novel on the theme of the sonnet from which the title is taken. Written in the form of autobiography, the author quite rightly begins with early intimations in order to balance the climax of love's frustration.

Claud's childhood in Bruges; his relations with his unstable but attractive father, with his colourful and flamboyant step-mother and the accompanying symphony of the life of a unique city are told with sympathy and perception. When his father dies, his deliberate choice of a life with Helena, in drab surroundings only made tolerable by her rich personality, reveals both the strength and weakness of his character. With such tender perception does Miss Johnson build the portrait that his attitude to Helena's lovers is as relieved of priggishness as is his subsequent treatment of the one woman who could have brought him happiness.

He could never conquer the inexplicable diffidences which thrust aside his yearning for Cecy and bound him with chains of false loyalty to the predatory Meg. To achieve sympathy and understanding for such a character, Miss Johnson must risk the irritation which weakness and fecklessness engenders. With exquisite craftsmanship, and to some extent by balancing it against the remarkable portrait of Helena, she carries the reader's sympathy through to the climax of a *liebestod*.

There are some moving and lovely passages in this novel.

Since he wrote *Low Company* Mr. Mark Benney has consolidated his talents to the degree of mature technique which is evident in his new novel **THE BIG WHEEL** (Peter Davies. 8s. 6d.)

As a novelist he is able to draw upon a fund of experience of the underworld and to use the multiplicity of its types and characters in a picaresque arrangement. He tells Harry Carne's story in his own words, rich in the slang and atmosphere of one whose childhood was spent in a slum tenement, who lisped in their argot and whose formative years were spent in misery and squalor.

Phœbe Summers provided the turning point of his life. Phœbe could offer him a measure of prosperity and freedom from the poverty he hated and feared. Equally he hates his benefactress, with her sinister hold on the underworld of shady bookmakers, "sports" promoters, night-club owners, and receivers of stolen goods. Tormented, introspective, he keeps with the phantoms of his early life an unprofitable strife which he attempts to conceal behind a mask of swaggering conceit.

The Ferris wheel—the big wheel of the fun fairs—symbolises the turn of man's fortune upward, but in the full cycle, inexorably downward. The tragedy is something from which neither his real friends nor his instincts for the better life could save him.

Like Mr. Benney's other work this is a social document of some potency and a real development of his narrative powers.

Finally there are two books which I would strongly recommend as being outstanding. **INTO CHINA** (Hodder and Stoughton. 18s.) is by that high-spirited traveller, Eileen Bigland. She took the famous Burma road, although she was told in Rangoon that such a trip was impossible. Eventually she accomplished it as the personal guest of the Central Chinese Government. Mrs. Bigland's good-humour might easily have failed in some of the appalling conditions she encountered en route to the generalissimo, but neither that, nor her eye for swift and concise observation failed her. Her book also contains some remarkable photographs.

MOUNTAINEERING HOLIDAY, by Frank S. Smythe (Hodder and Stoughton. 12s. 6d.), is also well illustrated by some fine photographic studies by the author. No climber myself, I find in the literature of mountaineering a special quality of exhilaration; a subtle mixture of adventure and serenity. In fact, the ideal relaxation from the besetting cares of to-day. Mr. Smythe is not only a distinguished mountaineer but writes elegantly and with a true eye for the stresses of descriptive prose. I enjoyed his book very much.

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GEORGE ROBEY ASSISTS IN THE NATIONAL SAVINGS MOVEMENT: His wisecracks (and old-time stage make-up) drew the crowd—and the money—when assisting at Shrewsbury last week

THE AMATEURS PLAN TO KEEP DRAMA ALIVE—THE SUMMER SCHOOL ON "DRAMA IN WAR-TIME": The British Drama League has just organised a Conference and Summer School on the Uses and Opportunities of Drama in War-time. The School was held at the Shakespeare Memorial Theatre at Stratford-on-Avon. The first part of its programme was devoted to lectures; and the second to practical instruction. The lecturers included Miss Lena Ashwell, Mr. Dennis Arundell, Miss Eleanor Elder, Miss Frances Mackenzie (one of the League organisers), and Mr. Geoffrey Whitworth, the League's Director. The real work being performed by the British Drama League in war-time is to provide entertainment for munition workers, A.R.P. centres and hospitals. In the picture above, a group of amateur members of the League are rehearsing *The Merchant of Venice* on the stage, whilst other amateurs watch the proceedings

A NEW FASCIST-BURLESQUE IN BALLET: *Barabau*, the new ballet at the Sadler's Wells, is designed to run for several seasons. It is a skit on Mussolini, and Fascism generally. Mr. Frederick Ashton (above) is the Fascist

CREATING ATMOSPHERE IN THE COCKTAIL BAR: When the new cocktail bar at the Grosvenor Hotel (Victoria) opened a few nights ago, Miss Micki Hood, the film actress, spent the evening smoking a cigar for a bet. The barman is J. Clifford Harrison, who took part in the Yukon goldrush of 1898

COMEDY IN THE WEST END

A New Thriller and a Revival

Reviewed by PHILIP PAGE

ALMOST a very good play indeed of the familiar comedy-thriller type is *Once a Crook* at the Aldwych. Perhaps one day we may see in London again comedy without thrills and thrills without comedy, but that is by the way. A fault in the play is, I think, a certain monotony of style, language, and atmosphere. Of course in a play which might have been written for Mr. Gordon Harker (and probably was), two-thirds of which is supposed to take place in a public-house, of which he is the licensee, in an unfashionable part of London, there must be dialect as well as dialogue to fit. At the same time, I trust I shall not be accused of snobbery in thinking that three acts of the Gor-blimey stuff, undiluted except for a touch of American here and there, is monotonous. Particularly tedious do I find comically-Cockney middle-aged women with very loud voices—charladies, cooks and such—in which the London stage at present abounds.

Nevertheless, here is a well-told yarn of an ex-convict, who has been going straight for years, dragged into crime again (or very nearly) because his young son, hypnotised by a beauteous blonde, is mixed up in a diamond robbery. More serious crime follows, and the ex-convict-publican is accused of murder but acquitted on evidence that seemed to me to be very thin. We know Mr. Harker was not guilty because (a) we saw the crime committed and the man who committed it and (b) we ought to know by this time that Mr. Harker's line is good-humoured vulgarity and not murder. Here he is at the top of his form, occasionally using language which even ten years ago would have made people leap in their stalls with horror; for the first time I heard spoken on the stage a very naughty monosyllable denoting the nether portion of the human anatomy.

Miss Anna Konstam is blonde and beauteous enough to hypnotise anyone. Mr. Richard Bird played with immense gusto an old soak of a bar-tender who quoted the Scriptures and Shakespeare and talked about Beethoven's Symphonies. A preposterously unreal character, but Mr. Bird had a lot of fun with it.

"The Chocolate Soldier" (Shaftesbury).—There is nothing sacrosanct about *The Chocolate Soldier*, any more than there is about any other musical comedy, though the music here is far better than usual. At the same time, I felt somewhat aggrieved as well as bored by the attempts in this revival to rag and to burlesque the whole thing, to indulge in utterly unfunny antics, and, so far as some women in the cast were concerned, to adopt a coy winsomeness very hard to bear. This nonsense was the more to be regretted, since the lovely and difficult music is sung well (even by the clowns and the coy ones), the orchestra, though small, is good, and the production as a whole is much more than merely competent.

The theatre list of the West End contains the names of several plays which were known in other times, but it is doubtful if the appeal of *The Chocolate Soldier* would have survived the years had it been originally produced in its present form.

Mr. Bruce Carfax, who succeeds the late C. H. Workman as Bumerli, is a good singer, but he marred many of his vocal efforts by grimacings, caperings, and clownage and foolery generally—energy which was not only wasted but did vast harm to what might have been a first-rate performance. Miss Doris Francis, the new Nadina, improved considerably after the first act and, like Mr. Carfax, is a good singer. Miss Ruby Stewart would probably have been far better had she been less determined to be the most vivacious young woman who ever trod the stage. For some unfathomable reason she gave us from time to time an imitation of gargling.

Comfortable quarters

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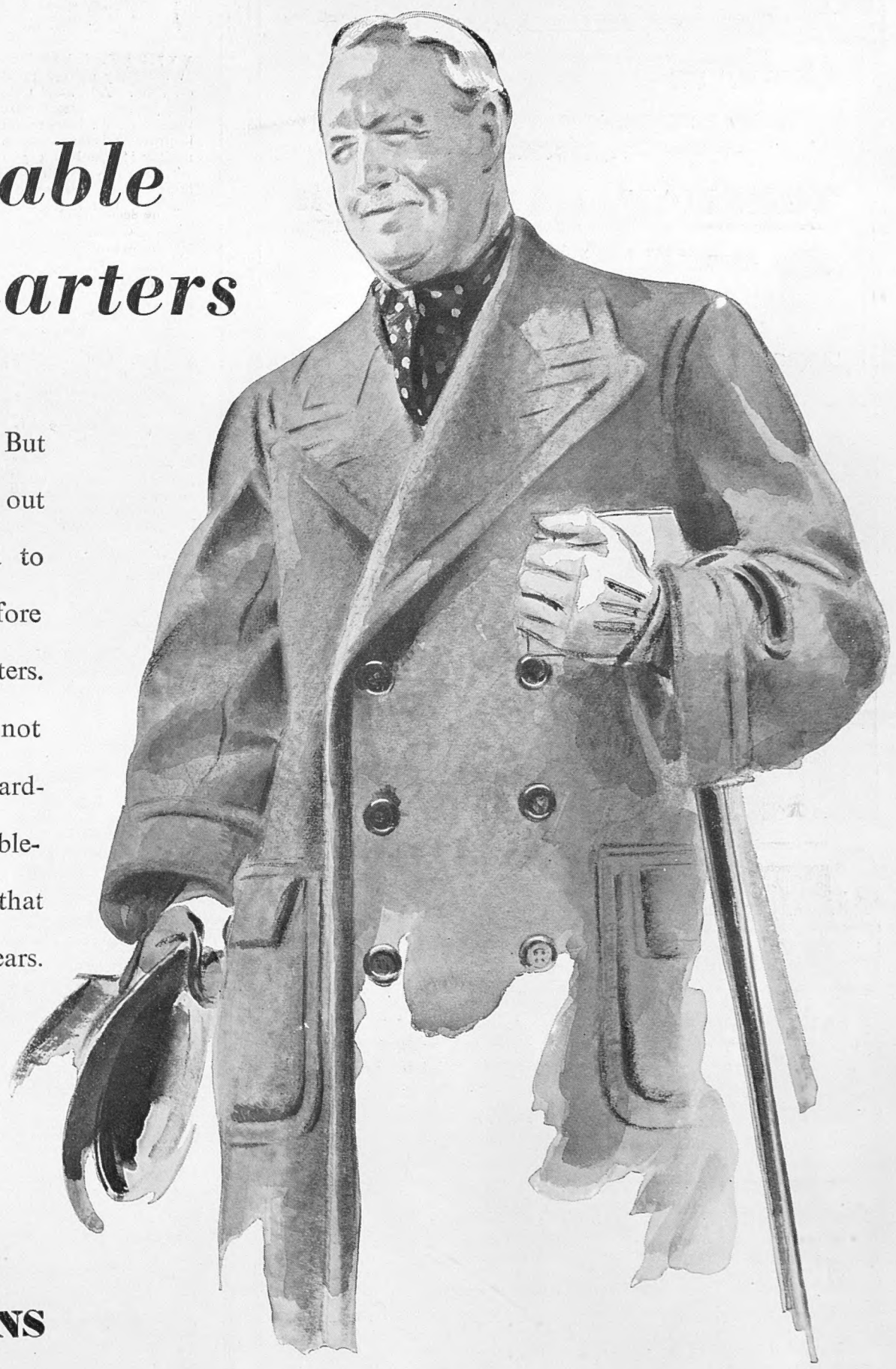

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In Quest of

WE pulled into Torquay station dead on time. Admitted that the journey took longer than it would have taken in pre-war days, but what matter if one has a good book and a corner seat—always possible to acquire if you reach the station early enough. Further, one is able to linger longer over the second luncheon, watching the passing countryside grow lovelier with every mile one travels westward.

Torquay, too, greeted us with that placid picturesqueness with which she greets all her visitors as they emerge from the station. Blue sky, sunshine and soft air prevail, and there are the same hotel buses, though not so numerous as of yore, to whisk one to one's destination in time for tea.

Of all our seaside resorts Torquay, pride of our English Riviera, can still offer the visitor, even in war-time, the same enjoyments she dispenses in days of peace. We miss the fairy lights after dark, but study instead the twinkling stars, and, free from military or naval objectives, when bedtime comes we can snuggle between the sheets — and go to sleep!

Most of her hotels are open, and in full swing. Like two gateways to her promenade, the five-star hotels, the Grand and the Imperial, offer that supreme sense of comfort and good living that can only be the result of good management and enterprise. Both should be full for the autumn and winter; if they are not, it will only be because base rumour, often inspired from hostile sources, tries to create the impression that Torquay is unsafe, because it is on the coast.

Fortunately there are still among us a sufficient number of sensible people who realise that no place to-day can be classified as a safe area, and therefore as we have to be somewhere, we are safer in such places as Torquay, which is neither near military objectives nor of military value.

In addition to the Grand and the Imperial, there is also open the extremely well-known Torbay Hotel, offering you that solid type of comfort that draws to its doors the same distinguished clientele year after year. As a race, we Britishers hate change, and if you have stayed at the Torbay before, I can well imagine that no mere war will cause you to break your habit.

Torquay has many other excellent hotels ready to welcome you, and to make you feel at home, if you are contemplating spending the winter there. There is Lincombe Hall, the garden hotel of Torquay, which goes from strength to strength. Since I have known it, central heating has been installed throughout the whole of the two buildings, and practically 50 per cent. of the bedrooms have private bathrooms.

Tucked in a secluded corner away from the sea, its garden ablaze with flowering shrubs, Lincombe Hall should have its usual quota of autumn and winter guests—a fine headquarters of peacefulness.

There are some people who prefer the smaller type of hotel, yet they must have a sea view; for them Torquay can offer, among others, The Headland and the Park Hall. Each in their own way enjoying a grandstand position on Tor Bay, each catering for a different type of clientele.

If you have been accustomed to staying at Torquay hotels which are no longer available "for the duration," you will be well catered for at any of the hotels I have mentioned, but for a wider choice, particularly of the smaller hotels, write to Mr. Atkinson, of the Torquay Hotels Association, "Remember," Shiphay Lane, Torquay.

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Good Hotels

By ASHLEY COURTENAY

And that reminds me that Babbacombe is still the same Babbacombe of olden days. One tumbles down to the tiny jetty, and leisurely toils back, and if Shanks's pony is unwilling, there is the cliff face, with views across to sunny Tor Bay.

Babbacombe or Torquay, Torquay or Babbacombe; it matters not which, so long as you stay at one or other these coming winter months. Don't listen to idle chatter over the teacups—come instead and investigate for yourself; you will discover peace, around, below and above you.

ANSWERS TO CORRESPONDENTS

O. K., Fotheringhay.—You say you want to spend a month or so near London, not right in town, but close enough to make frequent visits. I can give you the very spot, West Park Lodge, Hadley Wood, Herts. Here, buried in acres of private grounds, you'll not be able to see a neighbouring roof, yet you are only fifteen minutes walk from Cockfosters station and thirty minutes train travelling brings you to Piccadilly Circus. There is golf if you want it, just opposite the drive gates, and Mr. and Mrs. Victor will make you comfortable, I know.

M. H., Shropshire.—If you want a "starting-off place" for exploring the Cotswolds, you cannot do better than stay at Chipping Campden, at the Cotswold House Hotel. The town itself is delightful; there are lovely walks and drives all round, and Mrs. Hargreaves will look after you well at Cotswold House. If you prefer the sound of a village, you might try the Manor Farm Guest House at Willersey. It is simple, but comfortable; attractively remote without being too far from civilisation.

J. F., Norwich.—You say you are Devon-bound, and are looking for an hotel of the country house type. I strongly recommend you to go to Huntly, Bishopsteignton. You will find excellent food in spite of rationing restrictions, unusually comfortable beds, a large garden in which to relax, and glorious scenery.

Mr. Ashley Courtenay is always pleased to advise "Sphere" readers of hotels, both large and small, known to him personally. Letters, accompanied by a 2½d. stamp for reply, should be addressed to him, c/o the Editor, THE SPHERE, *32-34, St. Bride Street, London, E.C.4. Personal and telephone inquiries, however, cannot be accepted.*

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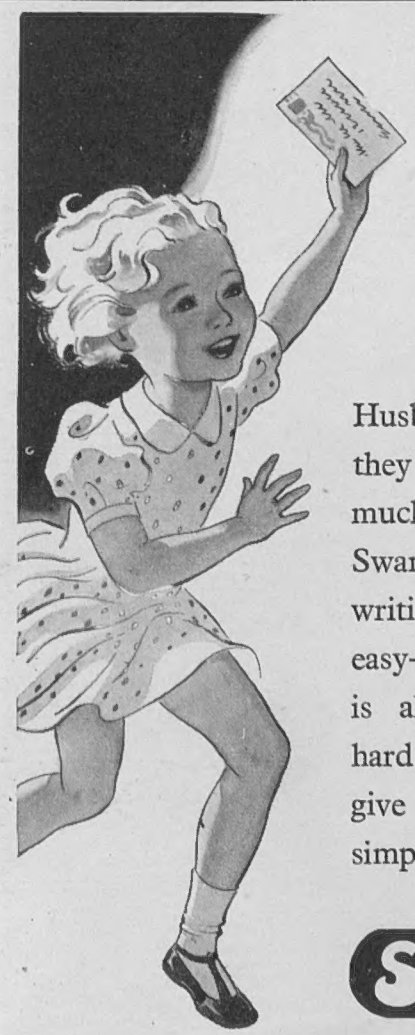

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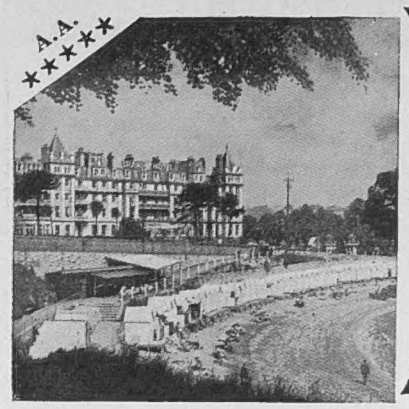

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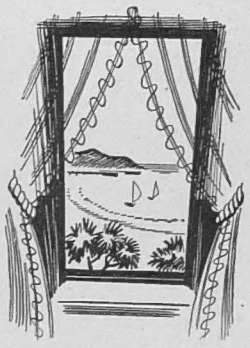

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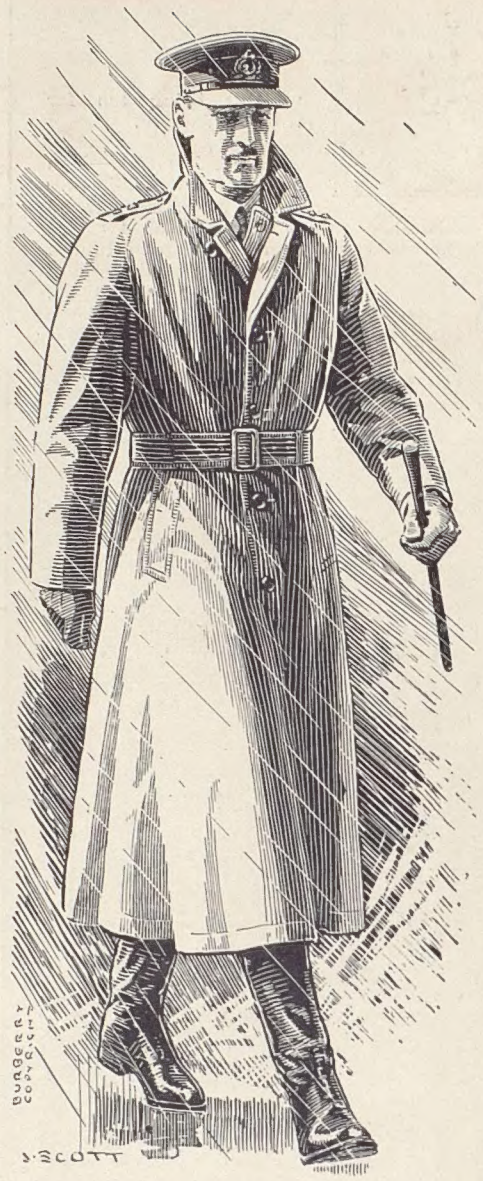

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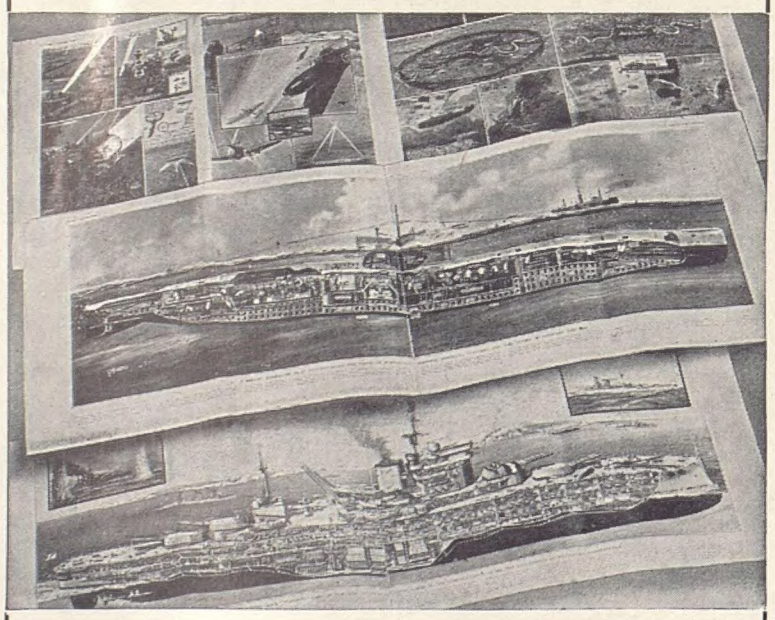

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